The Effectiveness of Non-Substantive and Substantive Responses in the Repair of Employee Trust In Management

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By

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“You may be deceived if you trust too much, but you will live in torment if you don’t trust enough”

*Frank Crane*
ABSTRACT

Employees’ trust in management is an important determinant of organizational effectiveness (Fukuyama, 1995). However, reports show that trust in management is generally low and reducing. The aim of the research documented in this thesis was to test the effectiveness of non-substantive responses (i.e., verbal) and substantive responses (i.e., behavioural) in the repair of employee trust in management, specifically supervisors, within a risk work context. The conditions under which these responses are effective, and the processes through which they operate, were also explored. Six empirical studies were carried out across gas, rail and healthcare industries. Using a combination of methods that drew on hypothetical, historical and real-time events, the studies revealed a number of key findings. First, the results showed an important role for the non-substantive response of an apology in the repair of employee trust. Non-substantive approaches that mitigate responsibility (i.e., justifications, denials, blame, excuses) were negatively related to trust. Second, a number of substantive responses were effective at repairing employee trust including a preventative procedure, monitoring and suspension. Analysis showed that these responses influenced employee trust by increasing perceptions of distributive justice, which increased the belief that management were repentant. Consistent with established research, repentance was positively related to trust. Interestingly, the results suggest that monitoring may reduce trust if it does not generate these mediating perceptions: a finding that was not shared with preventative procedures or suspension. Third, these main effects were moderated by the level of risk implicated in the event. When the risk is low, a non-substantive response was equally as effective in repairing employee trust as a substantive response. However, when risk is high, the combination of both a non-substantive and substantive...
response was required to repair trust. Fourth, in general, a substantive response implemented involuntarily (i.e., by the organization) was equally as effective as a response initiated voluntarily (i.e., by the member of management). Exceptions to this are when the target is of a high hierarchical status, and when an employee has been implicated in the event that reduced trust. In these cases, a voluntary response is more effective at repairing employee trust. Finally, preliminary results suggest implicit and explicit trust beliefs are largely separate constructs. Implicit trust beliefs are relatively stable therefore repair strategies need to be strong and targeted to impact upon these beliefs.

This research has important practical and theoretical implications. At a theoretical level, the research supports proposals made in accordance with attribution theory, that responses that are internally attributed are most effective in the repair of trust, whereas externally attributed responses are less effective. As one of the first studies to empirically test the effectiveness of substantive responses, it also expands existing models of trust repair to show an important role that can be played by behavioural responses, especially in the repair of high-risk violations. At a practical level, the research suggests that organizations can take an active role in repairing relations between employees and management by implementing effective substantive responses that do not simply punish management, but serve as a learning tool to help address the underlying cause of the violation.
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# Contents

<table>
<thead>
<tr>
<th>Abstract</th>
<th>i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgements</td>
<td>iii</td>
</tr>
<tr>
<td>Contents</td>
<td>v</td>
</tr>
</tbody>
</table>

## Chapter 1: Overview

1. Trust erosion and repair: Substantive and non-substantive responses ........................................ 5
2. Methods for exploring trust repair .................................................................................................. 7
3. Preventative procedures as an effective repair strategy: A preliminary test across hierarchical levels and personal involvement ................................................................. 9
4. The relative importance of a preventative procedure ........................................................................ 10
5. Monitoring and discipline: More effective than a preventative procedure? .................................... 11
6. Repairing implicit trust .................................................................................................................... 13
7. Discussion and conclusion .............................................................................................................. 13

## Chapter 2: Literature Review

1. The development of trust .................................................................................................................. 16
   1.1 Trust beliefs .................................................................................................................................. 17
   1.2 Trust intentions ............................................................................................................................ 19
2. The functions of trust ....................................................................................................................... 20
3. The erosion of trust ........................................................................................................................... 22
4. Trust repair ....................................................................................................................................... 25
   4.1 Non-substantive response strategies ............................................................................................ 26
   4.2 Substantive response strategies .................................................................................................... 29
   4.3 Non-substantive vs. substantive response strategies ................................................................... 32
5. Contextual influences on trust repair ............................................................................................... 33
   5.1 Risk .............................................................................................................................................. 34
   5.2 Personal implication in the event .................................................................................................. 35
   5.3 Status of the transgressor ............................................................................................................. 36
2.6 Individual differences in trust repair.............................................. 37
2.7 Trust repair vs. forgiveness........................................................... 39
2.8 Current study.................................................................................. 40

Chapter 3: Methodology................................................................. 43
3.1 Mixed methods approach............................................................. 43
3.2 Experimental vignettes................................................................. 44
3.3 Interviews....................................................................................... 46
3.4 Questionnaire survey................................................................. 49
3.5 Priming Task................................................................................. 50

Chapter 4: The Repair of Employee Trust across Hierarchical Levels ... 54
4.1 Method......................................................................................... 54
   4.1.1 Participants and procedure.................................................... 54
   4.1.2 Experimental task................................................................. 56
   4.1.3 Manipulations........................................................................ 58
4.2 Results......................................................................................... 62
   4.2.1 Manipulation checks............................................................ 62
   4.2.2 Validity testing...................................................................... 64
   4.2.3 Hypothesis testing................................................................. 66
4.3 Discussion.................................................................................. 71

Chapter 5: The Repair of Trust in a Healthcare Context..................... 81
5.1 Introduction.................................................................................. 81
   5.1.1 The Importance of trust in healthcare................................... 81
5.2 Method......................................................................................... 83
   5.2.1 Participants and procedure.................................................... 83
   5.2.2 Experimental task................................................................. 84
   5.2.3 Manipulations........................................................................ 87
5.3 Results......................................................................................... 89
   5.3.1 Manipulation checks............................................................ 89
   5.3.2 Validity testing...................................................................... 91
   5.3.3 Hypothesis testing................................................................. 92
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.4</td>
<td>Discussion</td>
<td>102</td>
</tr>
<tr>
<td>6.1</td>
<td>Method</td>
<td>107</td>
</tr>
<tr>
<td>6.1.1</td>
<td>Participants and procedure.</td>
<td>107</td>
</tr>
<tr>
<td>6.1.2</td>
<td>Measures</td>
<td>108</td>
</tr>
<tr>
<td>6.2</td>
<td>Results</td>
<td>112</td>
</tr>
<tr>
<td>6.2.1</td>
<td>Preliminary analysis</td>
<td>112</td>
</tr>
<tr>
<td>6.2.2</td>
<td>Validity testing</td>
<td>113</td>
</tr>
<tr>
<td>6.2.3</td>
<td>Main analysis</td>
<td>114</td>
</tr>
<tr>
<td>6.3</td>
<td>Discussion</td>
<td>123</td>
</tr>
<tr>
<td>7.1</td>
<td>Introduction</td>
<td>129</td>
</tr>
<tr>
<td>7.2</td>
<td>Method</td>
<td>136</td>
</tr>
<tr>
<td>7.2.1</td>
<td>Participants and procedure.</td>
<td>136</td>
</tr>
<tr>
<td>7.2.2</td>
<td>Experimental task</td>
<td>137</td>
</tr>
<tr>
<td>7.2.3</td>
<td>Manipulations</td>
<td>139</td>
</tr>
<tr>
<td>7.3</td>
<td>Results</td>
<td>143</td>
</tr>
<tr>
<td>7.3.1</td>
<td>Manipulation checks</td>
<td>143</td>
</tr>
<tr>
<td>7.3.2</td>
<td>Data analysis</td>
<td>145</td>
</tr>
<tr>
<td>7.4</td>
<td>Discussion</td>
<td>149</td>
</tr>
<tr>
<td>8.1</td>
<td>Introduction</td>
<td>157</td>
</tr>
<tr>
<td>8.2</td>
<td>Method</td>
<td>160</td>
</tr>
<tr>
<td>8.2.1</td>
<td>Participants and procedure.</td>
<td>160</td>
</tr>
<tr>
<td>8.2.2</td>
<td>Experimental task</td>
<td>161</td>
</tr>
<tr>
<td>8.2.3</td>
<td>Manipulations</td>
<td>163</td>
</tr>
<tr>
<td>8.3</td>
<td>Results</td>
<td>165</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Means and Standard Deviations for Outcome Measures Pre and Post Trust Violation</td>
<td>65</td>
</tr>
<tr>
<td>4.2</td>
<td>Multi-level CFA Results for Outcome Measures</td>
<td>66</td>
</tr>
<tr>
<td>4.3</td>
<td>Means, Standard Deviations and Correlations between Study Variables</td>
<td>67</td>
</tr>
<tr>
<td>4.4</td>
<td>Means and Standard Errors for Non-substantive Responses on all Outcomes Measures</td>
<td>72</td>
</tr>
<tr>
<td>4.5</td>
<td>Means and Standard Errors on Trust Outcome Measures in Relation to the Level of Risk Implicated</td>
<td>72</td>
</tr>
<tr>
<td>5.1</td>
<td>Means and Standard Deviations for Outcome Measures Pre and Post Trust Violation</td>
<td>93</td>
</tr>
<tr>
<td>5.2</td>
<td>Multi-level CFA results for Outcome Measures</td>
<td>94</td>
</tr>
<tr>
<td>5.3</td>
<td>Means, Standard Deviations and Correlations between Study Variables</td>
<td>95</td>
</tr>
<tr>
<td>5.4</td>
<td>Means and Standard Errors for Non-substantive Responses on all Outcomes Measures</td>
<td>98</td>
</tr>
<tr>
<td>5.5</td>
<td>Means and Standard Errors on Trust Outcome Measures in Relation to the Level of Risk Implicated</td>
<td>99</td>
</tr>
<tr>
<td>6.1</td>
<td>Thirteen Response Strategies Grouped by Response Type and Source of Implementation</td>
<td>112</td>
</tr>
<tr>
<td>6.2</td>
<td>CFA results for Trust Beliefs and Intentions</td>
<td>115</td>
</tr>
<tr>
<td>6.3</td>
<td>Means, Standard Deviations and Correlations between Study Variables</td>
<td>116</td>
</tr>
<tr>
<td>6.4</td>
<td>Results of Hierarchical Regression Analysis - Positive and Negative Correlations</td>
<td>120</td>
</tr>
<tr>
<td>6.5</td>
<td>Results of Hierarchical Regression Analysis - Positive Correlations Only</td>
<td>121</td>
</tr>
<tr>
<td>7.1</td>
<td>Means, Standard Deviations and Correlations between Study Variables</td>
<td>146</td>
</tr>
<tr>
<td>7.2</td>
<td>Pathway Estimates for Hypothesis 5</td>
<td>151</td>
</tr>
<tr>
<td>7.3</td>
<td>Pathway Estimates for Hypothesis 6</td>
<td>152</td>
</tr>
<tr>
<td>7.4</td>
<td>Pathway Estimates for Hypothesis 7 (Monitoring)</td>
<td>153</td>
</tr>
<tr>
<td>7.5</td>
<td>Pathway Estimates for Hypothesis 7 (Suspension)</td>
<td>153</td>
</tr>
<tr>
<td>8.1</td>
<td>Means, Standard Deviations and Correlations between Study Variables</td>
<td>168</td>
</tr>
</tbody>
</table>
8.2 Results of Hierarchical Regression ................................................................. 170
8.3 Pathway Estimates for Hypothesis 8 .............................................................. 172
8.4 Pathway Estimates for Hypothesis 9 .............................................................. 175
8.5 Pathway Estimates for Hypothesis 10 ............................................................ 176
8.6 Pathway Estimates for Hypothesis 11 ............................................................ 177
9.1 Primes and Pairs of Target Words used in the Priming Phase ....................... 191
9.2 Means and Standard Deviations for Outcome Measures Pre and Post-Placement .............................................................................................................. 197
9.3 Correlations between Explicit and Implicit Trust Beliefs Pre-Placement .... 198
9.4 Correlations between Explicit and Implicit Trust Beliefs Post-Placement .... 198
9.5 Integrity-based Violations which Occurred During Placements ................. 200
9.6 Competence-based Violations which Occurred During Placements .......... 200
LIST OF FIGURES

4.1 Two-way Interaction between Substantive Response * Risk on Integrity Beliefs.................................................................................................................. 73
4.2 Two-way Interaction between Substantive Response * Risk on Trust Intentions.................................................................................................................. 73
4.3 Four-way Interaction between Target * Risk * Non-substantive * Substantive Response on Integrity Beliefs........................................................................ 74
4.4 Four-way Interaction between Target * Risk * Non-substantive * Substantive Response on Trust Intentions........................................................................ 74
4.5 Four-way Interaction between Target* Risk * Non-substantive * Substantive Response on Intentions to Voice........................................................................ 75
5.1 Three-way Interaction between Non-substantive response * Substantive response * Risk (Low) on Ability Beliefs................................................................. 99
5.2 Three-way Interaction between Non-substantive response * Substantive Response * Risk (Low) on Trust Intentions................................................................. 100
5.3 Three-way Interaction between Non-substantive Response * Substantive Response * Risk (High) on Ability Beliefs................................................................. 100
5.4 Three-way Interaction between Non-substantive Response * Substantive Response * Risk (High) on Trust Intentions................................................................. 101
5.5 Two-way Interaction between Substantive Response * Event Type on Integrity Beliefs............................................................................................................. 101
5.6 Two-way Interaction between Substantive Response * Event Type on Intentions to Voice........................................................................................................ 102
7.1 Schematic Representation of Hypothesised Relationships........................................... 136
7.2 Photographs Used in Pilot Study.................................................................................. 139
9.1 Mean Trust Facilitation Scores Pre and Post Placement. Error bars represent ± 1 Standard Error......................................................................................................... 195
9.2 Levels of Implicit Trust in a Senior Nurse Pre and Post Placement in Violation and No Violation Groups.............................................................................. 203
9.3 Levels of Integrity beliefs in a Senior Nurse Pre and Post Placement in Violation and No Violation Groups.............................................................................. 205
9.4 Levels of Direct Trust in a Senior Nurse Pre and Post Placement in Violation and No Violation Groups.............................................................................. 205
APPENDICES

A Ethical Approval ................................................................. 263
B Chapter 4 Complete Vignette ........................................... 274
C Chapter 5 Complete Vignette .......................................... 274
D Chapter 7 Complete Vignette .......................................... 275
E Chapter 8 Complete Vignette .......................................... 277
F Implicit Task Practice Block; Primes and Targets .............. 277
CHAPTER ONE

Overview

Employees’ trust in management, as defined by a willingness to rely on management based upon positive expectations of their behaviours and intentions (Rousseau, Sitkin, Burt, & Camerer, 1998), is an important determinant of organizational effectiveness (Fukuyama, 1995). Trust leads to increased commitment to organizational goals (Tan & Tan, 2000), improved task performance (Aryee, Budhwar & Chen, 2002), and open communication with associated improvements in problem solving (Porter & Lilly, 1996). However, research suggests that employees’ trust in this group is generally low and reducing (Ferrin, Kim, Cooper & Dirks, 2007). Given the negative consequences that a lack of trust may have within organizations, researchers have started to investigate the ways in which employee trust may be ‘repaired’ following an act that reduces trust (e.g., a ‘transgression’).

The aim of research in this area is not to identify ways in which trust may be restored to its former level prior to the transgression, but to identify ways in which the damage to trust caused through a transgression may be minimised.

From an organizational perspective, reducing damage to employees’ trust has a number of benefits. First, it allows continued interactions with the person who has transgressed (assuming that the transgression is not too severe and that responses to the transgression are perceived as appropriate and effective). Second, it prevents overly negative stereotypes about management from developing, which research shows may influence initial trust beliefs in new relations with members of this group (Kramer, Leonardelli & Livingston, 2011; Milliman & Fugate, 1988). Third, it helps to preserve positive attitudes towards the organization if it is perceived to have responded appropriately to a transgression. This is important as a transgression
handled badly may see a reduction of trust in the organization, in addition to a reduction of trust in management who engaged in the transgression. In all of these cases, reducing the negative impacts on trust helps to maintain working relationships, reduce psychological distress (through negative emotional reactions to an event) and helps to maintain organizational functioning (De Cremer, Van Dick & Murnighan, 2011).

Research in the area of ‘trust repair’ has identified the types of transgressions that are likely to reduce a person’s trust in another, and some of the responses that may be taken to preserve trust in such situations. The studies detailed in this thesis aim to contribute to this literature in three main ways. First, it will explore trust erosion and repair in an applied setting; namely organizational contexts defined by personal physical risk (e.g., industries such as oil and rail), or risks to others (e.g., healthcare). Existing research generally focuses on business contexts in which a transgression is signalled by some financial gain or loss (Desmet et al., 2011; Dirks, Kim, Ferrin, & Cooper, 2011; Kim, Dirks, Cooper, & Ferrin, 2004; Morrison & Robinson, 1997; Robinson & Rousseau, 1994). It is also common within such studies to use students as participants who may, or may not, have personal experience of the context that they are required to evaluate. This approach has been effective for providing an initial insight into how trust is affected by different responses to transgressions. However, it is limited by the context in which it embeds itself. That is, it says little about how trust repair processes operate with actual employees, and when a transgression involves a consequence that is not financial in nature, but concerns some other cost such as personal risk of an injury. Understanding how trust operates in these contexts is important for establishing the generalizability of existing findings. It is also important for organizations wishing to
know how trust may be repaired following a transgression within industry, which is important given the effects that trust may have on employees’ safety attitudes and behaviours (Conchie & Donald, 2006; Flin & Burns, 2004; Watson et al., 2005).

Second, the thesis will identify the effectiveness of substantive trust repair responses (i.e., behavioural strategies that constrain the future actions of an individual) in preserving employees’ trust in management. To date, research has focused on the role of non-substantive responses (i.e., verbal accounts such as an apology or a justification), with some reported success in their ability to preserve trust (Kelley & Michela, 1980; Kim et al., 2004; Tomlinson, Dineen & Lewicki, 2004). However, it has been suggested that these responses represent ‘cheap talk’ and that to be effective, they must be accompanied by a substantive response that validates the promise that management will not commit an untrustworthy act again (Bottom, Gibson, Daniels & Murnighan, 2002). Research in substantive responses is still in its infancy and so the relative and absolute effects of these responses are relatively unclear. This thesis will address this issue and examine the effectiveness of these responses in relation to repairing an integrity-based violation by a supervisor (e.g., transgressions that show a supervisor to be dishonest). The thesis will focus specifically on preserving trust in supervisors as employees interact frequently with this level of management (Mankin, 2004), which results in high levels of social exchange (Lavelle, Rupp & Brockner, 2007) and high interdependence (Emerson, 1962). A transgression by a supervisor is therefore likely to significantly impact upon daily functioning, which affects organizational efficiency. Research also suggests that integrity-based violations are common occurrences amongst supervisors within risk industries (Conchie & Donald, 2008; Faber & Weeks, 2001;
Lofstedt, 2001). However, and unfortunately, it is also suggested they these violations are among the most difficult to repair in relation to employees’ trust.

Employees’ trust in a supervisor is distinct from their trust in an organization as it is associated with proximal variables such as the ability and integrity of the supervisor themselves. On the other hand, organizational trust relates to more global variances such as organizational support and justice (Tan & Tan, 2000).

Third, the thesis will identify whether the effectiveness of trust repair responses are moderated by situational factors. Specifically, the research will test theoretical proposals that the effectiveness of repair strategies are dependent upon the level of risk implicated in the transgression (Shapiro, Buttner & Berry, 1994), the level of management who have transgressed (Janowicz-Panjaitan & Krishnan, 2009), and the level of personal involvement implicated in the event (Jones & Davis, 1965). Shapiro et al. (1994) for example, suggested that non-substantive responses (e.g., apology) may be less effective when an individual has suffered severe consequences as the individual is likely to experience greater negative emotional reactions. In these situations, greater substantive responses may be required. However, these suggestions are largely non-empirical and require empirical evidence to validate such claims.

Expanding knowledge in these three areas will help answer the overarching research question as to the role of non-substantive and substantive responses in the repair of employee trust. This will not only help advance the trust repair literature, it will also offer important practical implications. It will highlight the appropriate response strategies that organizations and management should employ following transgressions that differ in terms of the level of risk, the hierarchical level at which the act occurred, and the level of personal involvement in the event. This will help
minimise the negative outcomes associated with a reduction in trust and ultimately maintain organizational functioning.

In summary, the thesis is structured as follows: In the next Chapter, a review of the trust literature in relation to what trust comprises, how it is broken and how it may be repaired is given. A number of predictions are made from this literature, and the methods used to test these predictions are outlined in Chapter 3. The thesis then presents the results of six empirical studies that test the role of substantive responses in trust repair within industry, showing their absolute effects and relative effects when compared to non-substantive responses (Chapters 4-9). The thesis concludes with a general discussion of these findings in Chapter 10, drawing important theoretical and practical implications. A short description of the main issues covered by the thesis is given in the following sections.

1.1. Trust erosion and repair: Substantive and non-substantive responses

Chapter 2 provides a review of what trust comprises, the types of events that can reduce trust, and how trust may be repaired followed a transgression. The Chapter begins by defining trust and its interrelated components of trust beliefs and trust intentions. It outlines the positive outcomes associated with trust, and explains this process through a social exchange framework (Blau, 1964) in which trust in another facilitates a reciprocal process so that an individual (e.g., employee) experiences a felt obligation to ‘repay’ another (e.g., management) through positive behaviours. The observation that employees’ trust in management is reducing is discussed, together with ways in which this may be addressed through actions by management and the organization. What becomes apparent from this research is that there is a heavy focus on non-substantive responses, such as an apology and denial (Kim et al., 2004), and relatively light focus on substantive responses such as
procedures and monitoring, which can shape behaviour to prevent untrustworthy actions (Sitkin & Bies, 1993).

In addition to the overlooked issue of substantive responses, there is a relative absence in attention given to factors that may moderate the effectiveness of a trust repair strategy. Much attention has been devoted to how the nature of a transgression (e.g., competence-based [lack of ability] or integrity-based [lack of honesty]) may influence trust repair strategies (Kim et al., 2004). However, there are other factors that are equally salient in shaping the effectiveness of a response. Chapter 2 illustrates this through a discussion of the effects of transgressions from different hierarchical levels, following events with different levels of severity of risk, and when the person investing trust is implicated in the event that results in this risk. According to research reported in Chapter 2, a severe violation or one in which an individual is adversely affected, results in more negative emotional reactions (e.g., Jones & Davis, 1965; Lewicki & Tomlinson, 2003), and requires more substantial repair efforts. It is also well known that employees can express differing levels of trust in management (Perry & Mankin, 2004), and that these levels facilitate evaluations of trust (Finkelstein & Hambrick, 1996), and arguably attempts at its repair. Research has suggested that supervisors are likely to be perceived as more categorically ‘similar’ than distal managers, which is likely to lead to more favourable assessments regarding their trustworthiness (Brewer, 1996).

In addition to these situational moderators, there are a number of individual factors that may affect the effectiveness of a response strategy. These include a person’s general propensity to trust others and their propensity to trust a specific target (e.g., supervisors), identification with the target, and work experience. As becomes clear in the discussion in Chapter 2, these factors each have an independent
effect on trust beliefs and intentions (Burke, Sims, Lazzara & Salas, 2007; Dalbert, 2002; GuoHong Han & Harns, 2010; McKnight, Cummings, & Chervany, 1998), yet they are often overlooked in studies on trust repair. This may, in part, relate to the fact that most studies have been carried out on student populations in which factors such as identification with management, and work experience may not apply.

1.2. Methods for exploring trust repair

Chapter 3 describes the methodologies that are employed in this thesis to test the role of trust repair responses in preserving employees’ trust in management following an integrity-based transgression. To try and overcome the limitations associated with any one approach, a mixed methods approach is used in which both qualitative and quantitative methods are employed. These methods are described in Chapter 3 and include experimental vignettes, interviews, a questionnaire survey and a priming task.

Experimental vignettes were used to present participants with information about an event, and asking them to rate their response to that event. This method is the dominant approach in studies of trust repair (Gill, Boies, Finegan & McNally, 2005; Kim, Diekmann & Tenbrunsel, 2003; Matilla, 2009), in large part because of the level of control that it affords the researcher, and the fact that real-time violations are difficult to study. Vignettes offer a similar level of control to what is seen in lab-based experiments and allow individual effects to be isolated, but can be used with applied groups (e.g., those employed within industry). However, one limitation of experimental vignettes is that participants are asked to comment on events that they have read about, which although they are based on real events, may not have been personally experienced by the participant. For this reason, they have relatively less ecological validity compared to studying events taken from the participants’ personal
history. To address this limitation within this thesis, interviews, a questionnaire survey and a priming task were used.

Semi-structured interviews were carried out with a sample of employees from the gas industry. As a method, interviews are one of the most productive ways to learn about an issue as questions can be aimed towards those with direct experience of the issue, thus eliciting informative responses (Cassell & Symon, 1994). In this thesis, interviews offered a way to test proposals within the literature, provide an insight into the range of events that may reduce trust and the responses that are most, or least, effective in restoring trust. While interviews may be limited in their breadth (i.e., they do not seek to quantify findings), they have strength in their depth. Compared to quantitative methods, interviews impose less restrictive classifications on a data set and are not limited to that of pre-existing constraints (Fraenkel & Wallen, 1996). Further, as the data generated from these events reflect real experiences, ecological validity is enhanced (Patton, 1980).

The questionnaire survey collected information on the frequency that supervisors had engaged in a transgression within the last six months and the responses (substantive and non-substantive) that followed. This information was correlated with how much trust employees held towards their supervisor. This method allows the effectiveness of response strategies, as they apply to actual events in a person’s history, to be quantified and their relative effectiveness established. It also retains the advantages associated with qualitative and quantitative methods by providing information regarding the natural occurrence of incidents within the workplace, and exercising some control over participants’ responses with the use of quantifiable measures that are more objective in nature.
The priming task offered a method of exploring trust following a real-time transgression and considering this (implicit) trust to that measured at an explicit level. Implicit trust measurements are less susceptible to response biases than explicit measurements, in which participants may overestimate trust or respond in socially desirable ways (Fazio & Olson, 2003). Implicit and explicit trust operate at distinct levels with research suggesting that they may be differentially affected by repair strategies, such that implicit trust is harder to preserve than explicit trust (Gregg, Seibt & Banaji, 2006; Petty, Tormala, Brinol, & Jarvis, 2006; Rydell & McConnell, 2006). The study of both implicit and explicit trust therefore provided a rich understanding of trust erosion and repair at two levels of trust, and following an actual violation (rather than hypothetical or one based in the person’s past).

1.3. Preventative procedures as an effective repair strategy: A preliminary test across hierarchical levels and personal involvement

Chapters 4 and 5 provide an initial test of the role of a preventative procedure (substantive trust repair response) in preserving employees’ trust following an integrity-based violation. It examines how this response compares to non-substantive responses, and importantly, how this response is moderated by the hierarchical level of the transgressor (supervisor or manager) (Chapter 4) and when a person is implicated in the event (Chapter 5). A preventative procedure is one of the most commonly employed approaches to adopt following a transgression within a risk industry (e.g., Amarasingham, Plantinga, Diener-West, Gaskin & Powe, 2009). Procedures such as these, focus on system-level changes whereby modifications are made to the system the organization operates under, in order to regulate individuals’ behaviour to comply with organizational expectancies. In accordance with theories of control (Ajzen, 1979), following the implementation of a procedure, behaviour is
likely to be deemed as under perceived control which may reduce negative
expectations regarding an individual’s future actions, and consequently increase
trust. However, empirical evidence is required to validate this claim. The aim of
Chapters 4 and 5 was to provide this evidence and identify whether a procedure can
add anything above and beyond what can be offered with non-substantive responses.
In both Chapters, the level of risk implicated in the violation was also considered in
order to examine whether the effectiveness of trust repair responses are moderated
by risk.

At a theoretical level Chapters 4 and 5 will help contribute to the small
amount of empirical research showing the importance of a substantive response in
repairing trust. Additionally, the Chapters are able to demonstrate the influencing
role of moderators in the trust repair process. Important insights are also identified
for organizations and management concerning the appropriate response strategies to
employ following transgressions.

1.4. The relative importance of a preventative procedure when compared to
other responses

Chapter 6 builds on Chapters 4 and 5 by exploring how a preventive
procedure compares to other substantive (and non-substantive) actions, following a
trust violation. A preventative procedure represents only one type of substantive
response. Other responses that are substantive in nature include monitoring, training,
and discipline. Unlike a preventative procedure, these responses focus on the
individual’s (e.g., supervisors) behaviour directly, as opposed to the system in which
they operate. There is some evidence to suggest that these responses may be more
effective in the repair of trust than a procedure (Dirks et al., 2011; Gillespie & Dietz,
2009; Schweitzer & Ho, 2005). The aim of Chapter 6 was to provide an initial test of
this proposal. Specifically, the main questions that this Chapter sought to answer concerned the relative importance of a procedure when compared to other substantive responses, and also whether or not non-substantive responses can add anything further to the trust repair process once substantive responses have been implemented.

Identifying the relative importance of different substantive responses will provide insights into the effectiveness of a range of substantive response strategies that have not been previously considered for their role in trust repair. At a practical level it will also help inform organizations in practice about the relative frequency of transgressions, how much certain responses are already practiced, and the most and least effective responses to employ in order to repair trust.

1.5. Monitoring and discipline: More effective than a preventative procedure?

Chapter 7 tests the specific effects of monitoring and discipline (i.e., suspension) as substantive trust repair strategies, and Chapter 8 compares their effectiveness to a preventative procedure. These substantive responses are commonly used within organizations following a transgression (Fiddler, 2008; Greenan, 2012; McWatt, 2011), and have been shown to be effective. In addition to testing the direct effects of monitoring, suspension and a preventative procedure in trust repair, the Chapters examine the effects of these responses on employee trust in the organization. Given that it is often the ‘organization’ who implements these responses, it is important to test if a transgression responded to appropriately can have implications beyond the transgressor. The Chapters also seek to unpack some of the processes through which these strategies impact employees’ trust. For example, some sectors of industry employ ‘Just and Fair’ models of discipline, which outline the process through which employees are taken following breaches to
procedure, or acts that put another at risk of injury. As implied by the name of these models, they are intended to generate perceptions that people are disciplined fairly. Research shows that perceptions of fairness are closely linked to trust, and may substitute for it when no trust-relevant cues are present (Hafer & Olson, 1998). One implication of these findings is that discipline perceived to be fair is likely to be effective at preserving trust. Chapter 7 tests this proposal through the mediating mechanisms of distributive justice (i.e., the perceived fairness of the outcomes of any decision-making process, including imposed discipline). It also considers perceived repentance (i.e., an individual’s feelings of regret and learning from the response to a transgression), and procedural justice (i.e., the perceived fairness of the policies and procedures used in decision-making processes) as mediators. Chapter 8 considers perceived prevention (i.e., constraints through which organizations can limit untrustworthy behaviour) and retributive justice (i.e., the imposition of punishment that is proportionate to the transgression). Theories of organizational justice (Greenberg, 1987) and organizational control (Ajzen, 1979) implicate these processes to be important in the trust repair process.

Chapters 7 and 8 bring together the findings from the previous studies to test a more complete model of trust repair. This provides theoretical advancements to the trust repair literature by identifying whether the substantive responses of monitoring, suspension and a procedure are effective in the repair of integrity-based violations, and if they contribute anything beyond the effects of an apology. The Chapters also has important practical implications for organizations, as it is the organizations that generally implement these substantive responses. It serves to highlight the active role that organizations can play in repairing relations between employees and supervisors following a violation of trust.
1.6. Repairing implicit trust

Thus far, the thesis has considered the effects of trust repair on explicit trust attitudes. Chapter 9 develops this by exploring real-time trust violations, and their effects on implicit trust beliefs. Implicit trust refers to the automatic trust evaluation activated from an attitude-object (e.g., supervisor). These beliefs have been shown to be distinct to explicit beliefs (i.e., an individual’s conscious evaluation of an attitude-object), and to be less susceptible to response biases (Burns, Mearns, & McGeorge, 2006). Research also suggests that implicit measures predict spontaneous behaviours as there is reduced opportunity and motivation to deliberate (Fazio & Olson, 2003). When put into context, implicit trust could lead to behaviours such as speaking up and challenging unsafe acts at the point of their occurrence (Burns et al., 2006). As a result, high levels of implicit trust are needed across organizations, particularly those defined by risk. However, how implicit trust is influenced by repair strategies is unknown. Chapter 9 aimed to address this gap in research.

The study provides important theoretical advancements to the literature as it is one of the first to empirically explore trust violations and repair following a real-time trust violation, and at an implicit level. It also identifies if implicit (and explicit) trust are affected by different response strategies. Finally, it identifies whether greater substantive action is required in the repair of implicit beliefs, which research suggests are relatively more fixed and less malleable than explicit beliefs.

1.7. Discussion and conclusion

Chapter 10 provides an overall summary of the findings reported across Chapters. It explains how these findings collate to help answer the research question. First, it specifies the importance of non-substantive and substantive responses in the repair of trust in contexts defined by physical risk. Second, it discusses the relative
effectiveness of substantive responses in the repair of employee trust, with particular reference to monitoring, discipline and a preventative procedure. It also indicates the psychological mechanisms underlying the effectiveness of these responses in facilitating trust. Finally, it discusses a number of moderators and their impact upon non-substantive and substantive response strategies in their ability to repair trust, with particular reference to the severity of the violation, the hierarchical level of the violation and the level of personal involvement in the event.

The overall results of the research provide important theoretical implications for the trust repair literature. It identifies the relative effects of a number of different substantive responses, with an actual sample of employees. It also tests their effectiveness in relation to a number of moderating and mediating factors. Furthermore, by exploring the effects of a real-time trust violation and its impact on implicit trust beliefs, it advances knowledge as to whether repair strategies that are effective in the repair of explicit trust can generalise to the repair of implicit trust. The study also provides important practical implications for organizations and management. It suggests that there are a number of actions that can be taken to reduce the negative consequences associated with an integrity-based violation. Importantly, in situations where a response is not given, trust will deteriorate more.
Employees’ trust in management is an important determinant of organizational effectiveness (Fukuyama, 1995). Trust increases positive work behaviours such as cooperation, communication and commitment to organizational goals (Burke, Sims, Lazzara & Salas, 2007; Davis, Schooman, Mayer & Tan, 2000; Dirks & Skarlicki, 2004; Zand, 1972). It achieves this through principles of social exchange such that management engage in actions that benefit employees and generate trust. Employees’ then feel a sense of obligation to reciprocate the actions of management in a way that benefits them (Blau, 1964). One of the ways employees achieve this is by engaging in positive work behaviours.

Despite the positive outcomes associated with trust, research suggests that employee trust in management is low and reducing (Ferrin, Kim, Cooper & Dirks, 2007). In large part this is attributed to actions of management that signal a lack of integrity. This may include holding immoral values, acting dishonest or actively deceiving employees for personal gain. Of the different determinants of trust, displays of integrity are among the strongest (Lee & Turban, 2001). This observation creates a challenge for organizations. It raises the question of how to restore (or weaken the negative effects on) employees’ trust following signals of low integrity by management, which research suggests to be common.

The current thesis aims to contribute to an understanding of this issue. The following sections in this Chapter provide a backdrop to the studies presented in this thesis. The first part of the Chapter provides a short overview of trust, detailing its development and functions within organizations. The second part discusses the ways in which trust may be lost and steps that may be taken in its repair.
second part, gaps within existing research, which this thesis aims to start to address, are discussed.

2.1 The development of trust

In the past fifteen to twenty years, interest in the role of trust within organizations has increased. Over this period, research has developed from proposing theoretical models on how trust develops and evolves over time, to more empirical work that tests these models, or considers trust in more complex models of broader organizational processes (e.g., Bstieler, 2006; Cote & Latham, 2006; Ferrin, Bligh & Kohles, 2007; Kramer & Tyler, 1994; Mayer, Davis & Schoorman, 1995; Vlaar, Van den Bosch & Volberda, 2007; Lewicki, McAllister & Bies, 1998). Within this work, trust is generally accepted as being an attitude that a person (trustor) holds towards another (trustee) (Gargiulo & Ertug, 2006).

Consistent with classic attitude theory (Fishbein & Azjen, 1975; Weiss & Cropanzano, 1996), trust ‘attitudes’ comprise a cognitive, affective and intention component (Erdem & Ozen, 2003; Gill, Boies, Finegan & McNally, 2005; Mayer, Davis & Schoorman, 1995; McAllister, 1998; McKnight, Cummings & Chervany, 1998). Cognitive and affective components are typically captured through a trustor’s beliefs about a trustee’s character, and are argued to inform a trustor’s intentions to rely on the trustee (i.e., to have trust intent). Rosseau, Sitkin, Burt and Camerer (1998) capture these components and direction of effect in their widely held definition of trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another” (p. 395). Positive expectations reflect a trustor’s beliefs regarding the trustee’s character, and accepting vulnerability reflects the trustor’s intention to act in a way that places them in a vulnerable position. Trust beliefs and trust intentions
are related constructs but exist as separate entities, as an individual can trust in some ways (e.g., in a trustee’s character), but not others (e.g., to speak up to them) (Lewicki et al., 1998; Lewis & Weigert, 1985). Trust is therefore not a behaviour (e.g. cooperation), or a choice (e.g. to take a risk), but instead an underlying psychological condition that can be a direct result or cause of such actions.

The cornerstones of trust are vulnerability and risk (Mayer et al., 1995), as trust leads to potentially risky actions that make a trustor vulnerable if the trustee does not act in the way expected. A simple illustration of this is engagement in voice behaviours. Voice behaviours refer to acts that challenge the status quo within organizations, such as making suggestions for change (LePine & van Dyne, 1998). Although they lead to organizational learning, their enactment by employees typically requires trust in management to regard these behaviours as constructive and respond to them accordingly. The risk with these actions comes from the potential for voice behaviours to be regarded by management as criticism of the current system and responded to unfavourably with negative consequences for the employee. Engaging in voice behaviours is therefore regarded as a ‘risky’ behaviour, which is more likely when employees hold trust in the recipient of these behaviours (LePine & Van Dyne, 1998). When a situation is regarded as predictable, or the personal risk of engaging in an action is considered nil, then the situation is typically not defined as one requiring trust.

2.1.1 Trust beliefs

Trust beliefs reflect the extent to which a trustee is regarded as being trustworthy. Trustworthiness is indicated by a number of personal qualities, which have been proposed to range from one to as many as ten (Butler, 1991; Lee & Turban, 2001; Peters, Covello & McCallum, 1997). These qualities include ability,
openness, care, value similarity, honesty and respect. In an effort to condense this research into a workable model for organizational research, Mayer et al. (1995) proposed an integrative model of organizational trust. Drawing on existing research, they suggest that trust develops from perceptions of another person as trustworthy, which develops from judgments made about three categories of qualities that reflect a trustee’s Ability, Integrity and Benevolence.

**Ability** refers to a trustee’s competence to complete a work task. It is indicated through qualities such as knowledge, skills, qualifications, and general wisdom (Gabarro, 1978). When these qualities are perceived in relation to the current task or context, the person is regarded as having ability. **Integrity** refers to the belief that the trustee is ethical, honest and reliable. This is indicated through qualities such as openness, behavioural consistency and holding shared values (Colquitt, Scott, & LePine, 2007). **Benevolence** refers to a trustee acting through concern for others with little expected benefit for themselves. This is indicated through acts of altruism, support, care, and loyalty (Mayer et al., 1995).

Of the three sets of qualities, ability and integrity are more important in the initial development of trust, while benevolence plays a stronger role in later stages of a relationship when emotional connections develop (Butler & Cantrell, 1984; Cook & Wall, 1980; Mayer et al., 1995). There is also evidence to suggest that of the three trustworthiness beliefs, those regarding another’s integrity may be most important in the development of trust (Conchie, Taylor, & Charlton, 2012; Nwokah, & Ezirim, 2009). Interestingly, these are also the hardest to repair following a breach in trust (Reeder & Coover, 1986).

The importance of trustworthiness qualities in the development of trust has received considerable support (e.g., Dirks, Kim, Ferrin & Cooper, 2011; Hardin,
Typically, research shows that trustworthiness beliefs play a stronger role in trust formation within organizations when compared to factors such as a person’s general disposition to trust others or their general trust in the target occupational group (Colquitt et al., 2007). Perceptions of trustworthiness emanate from a trustee’s actions, but may be enhanced through factors such as shared group identification and positive stereotypes (Aryee, Budhwar, & Chen, 2002; Conchie & Donald, 2009; Kramer, 2010; Lewicki & Bunker, 1996).

2.1.2 Trust intentions

Trust intentions operate as the immediate antecedent to a trustor’s ‘risky’ behaviours (see Section 2.1.) and are influenced by trust beliefs. Consistent with classic attitude theory (Fishbein & Azjen, 1975; Weiss & Cropanzano, 1996), positive beliefs regarding a trustee’s trustworthiness promote a positive intent to rely on the trustee to act positively to some behaviour, or in some situation, which leads to actual behaviour. Trust intentions are most often defined as a trustor’s willingness to rely on a trustee to make important decisions that may critically affect the trustor, and to make these decisions even if the trustee’s actions cannot be observed (Mayer & Davis, 1999). Gillespie (2001) proposed an extension to this definition through the suggestion that in addition to a willingness to rely, trust intentions include a willingness to disclose sensitive information. According to Gillespie, reliance and disclosure are the two main outcomes from perceiving another as trustworthy, as both place the person at some risk when they engage in these actions. The existence of these intentions as distinct entities has been supported at an empirical level (Conchie et al., 2012; Gillespie, 2001).
An intention to rely on a trustee to make decisions that affect the trustor, and a willingness to disclose sensitive information (e.g., near-misses) are both important within organizations. They both allow an organization to function effectively and they both require trust in another—typically management. The effects of a breach in trustworthiness expectations on reliance intentions have been examined and shown to reduce in accordance with trust beliefs (Kim et al., 2004). The effects of breaches in trustworthiness expectations on disclose intentions are yet to be examined. There is little evidence to suggest that these will operate differently, however a difference might emerge in the magnitude of the effect of breaches on these intentions. If so, this may suggest that employees regard each type of intention as carrying a different level of risk and requiring a different level of assurance that the other is trustworthy.

2.2 The functions of trust

Trust acts as a social lubricant for workplace processes, making it a key determinant of organizational success (Fukuyama, 1995). It has been linked to open communication, increased task performance through greater concentration and commitment, and reduced turnover intentions (Burke, Sims, Lazzara & Salas, 2007; Davis, Schooman, Mayer & Tan, 2000; Dirks & Skarlicki, 2004; Tan & Tan, 2000; Williams & Karau, 1991; Zand, 1972). Its wide-ranging effects may be attributed to the fact that individuals hold trusting relationships with multiple targets within organizations, from co-workers through management to the organization itself (Pirson & Malhotra, 2007), and operate the norm of reciprocity in each of these relationships. As individuals seek to reciprocate the benefits they receive from each of these targets’ trustworthy actions, the effects are more wide-ranging when compared to the effects from a single trusting relationship. According to Social Exchange Theory (Blau, 1964), trust defines a relationship as one of social exchange
in which norms of reciprocation are common. Trustworthiness actions from one 
person (e.g., management), generates trust from another (e.g., employee), which 
creates a sense of obligation within employees to reciprocate managements’ actions. 
One way in which employees do this is through positive behaviours that reflect more 
than simple compliance. The outcome of trust is generally specific to the nature of 
the interaction, such that trust in co-workers may lead to greater helping on tasks, 
and trust in the organization may lead to greater engagement in voice behaviours. 
The functions of trust are most clearly illustrated within employee-supervisor 
relationships. Supervisors have regular contact with employees and act as an 
important role model for behaviour. Their close proximity to employees means that 
they transmit important information about the organization’s values and what 
behaviours will be rewarded, and so have a relatively strong influence on employees’ 
actions (Mankin, 2004). The positive effect of supervisors on employees is, in part, 
determined by how much they are trusted. Research shows that trust in supervisors is 
related to increased cooperative, altruistic, and extra-role behaviours (Kramer, 1999). 
It has also been related to an increase in positive behaviours in specific work 
contexts, such as safety. Watson (2005) found that employees’ trust in supervisors 
increased perceptions of work environment safety, which was negatively related to 
risk taking behaviour. Further, Conchie and Donald (2009) found that the extent to 
which supervisors’ safety behaviours impact employees’ engagement in safety 
depended on how much they were trusted. When supervisors were trusted with 
safety, their effect on employees’ engagement in safety was positive and significant. 
Consistent with attitude models, their later work showed that supervisor’s actions 
informed employees’ trust beliefs, which informed their intentions and subsequent 
behaviours (Conchie et al., 2012). Employees’ trust in supervisors will be the focus
of the research in this thesis due to the substantial impact this dyad has upon organizational effectiveness.

While positive outcomes have been associated with trust, its utility to an organization becomes most apparent when it is lost or broken. Research suggests that when employees feel that management cannot be trusted, they spend large amounts of time and energy ‘covering their backs,’ which detracts from their work performance (Mayer & Gavin, 2005). Studies have shown that employees are more likely to withhold information, which hinders the flow of communication and work coherence (Chua, Kaynak, & Foo, 2007). Turnover also increases as employees feel that management are exploiting their vulnerability and are acting in an unjust way (Roberts, Cooper & Lawrence, 1999). Moreover, research in workplace safety has related distrust (a lack of trust) to reduced safety communication and commitment, limited organizational learning and an increased rate of accidents and near-miss events (Conchie & Donald, 2006; Hale, 2000; O’Toole, 2002). As will be shown in the following section, acts most likely to reduce employee trust are those that signal a lack of integrity, and to a lesser extent, a lack of competence.

2.3 The erosion of trust

Research suggests that employees’ trust in management is low and reducing (Ferrin et al., 2007). One study found that within one organization, only 39% of employees explicitly claimed to trust management (Watson & Wyatt, 2002). Part of the reason for this reduction in trust is acts that signal a betrayal to trust expectations (Chan, 2009). Betrayal is relatively frequent within organizations, with some studies finding that 34.8% of employees can recall at least one incident were they have been betrayed (Jones & Burdette, 1994). Studies focused on betrayal show that a single act of untrustworthy behaviour is sufficient to reduce trust (Hansson, Jones &
Fletcher, 1990; Jones & Burdette, 1994), despite the fact that more than one act is necessary to develop trust (Slovic, 1993). This trust asymmetry effect has been attributed to the fact that individuals hold a negativity bias in which they weigh negative information more heavily than positive information when forming judgements (Siegrist & Cvetkovich, 2001; Slovic, 1993; White & Eiser, 2005). A single negative (untrustworthy) act will therefore have a stronger impression on how much a person trusts another than a single positive (trustworthy) act.

Acts that lead to a reduction in trust, and which have been considered in the trust repair literature, are generally classified as either competence-based violations (e.g., the trustee displays a lack of ability or skill) or integrity-based violations (e.g., a trustee shows a lack of integrity, such that they act immorally or for self-gain) (Dirks & Ferrin, 2002; Kim et al., 2004; Dirks et al., 2011). The ‘violation’ within these acts relates to the fact that the trustee’s behaviour or assumed intention runs counter to (i.e., violates) a trustor’s expectations about their trustworthiness (ability and integrity beliefs) on which trust is based. Of the two main types of trust violations, a lack of integrity is thought to be most detrimental to employee trust and the hardest to repair (Reeder & Coover, 1986).

The unequal effects of competence- and integrity-based violations on employees’ trust is explained by Attribution Theory (Heider, 1958; Weiner, 1992), and the propositions this makes about an individual’s behaviour based on their interpretations of another’s actions. According to attribution theory, an individual makes one of two attributions when interpreting an event: whether the event reflects a stable internal attribute of the person, or is due to an unstable external factor. Internal attributions are made when the person is assumed to have acted in a way based on their attitude, character or personality. External attributions are made when
an individual’s actions are attributed to situational forces (Heider, 1958). The common assumption within the trust repair literature is that competence-based violations are attributed to external sources, and integrity-based violations are attributed to internal sources (Maddux, Kim, Okumura, Brett, 2011). Elangovan and Shapiro (1998), for example, suggest that a lack of competence reflects a situation of “can’t” rather than “won’t”, and are regarded as a less reliable indicator of an individual’s internal disposition. Such situations may be quite common within organizations, especially industry, as economic pressures may result in individuals being placed in situations that they are ill-skilled to deal with.

Reeder and Brewer (1979) proposed a schematic model of dispositional attribution, which effectively explains the distinction between competence-based and integrity-based violations. According to this belief formation perspective, an individual uses hierarchically restrictive schemas, which are the inherent differences in the way people assess positive versus negative information about competence versus integrity (Reeder & Brewer, 1979), when forming perceptions of trustworthiness. A person’s demonstration of competence or integrity signals where on a trustworthiness continuum they sit, with these demonstrations carrying different diagnostic weight regarding the other person’s character. According to Reeder and Brewer’s (1979) theory, acts of competence carry strong diagnostic weight that another person is trustworthy as only those highly skilled can perform at a high level. A competent individual would be expected to demonstrate sufficient skill across a number of performance levels and an incompetent individual would only be expected to perform up to a level that is proportional with their skills. For this reason, a single competent act would be seen as a reliable signal of competence as an incompetent person would not be able to perform an act that was beyond their
capability. However, a single incompetent performance would not be seen as a reliable signal of incompetence as both a competent and incompetent person may perform poorly in situations where there is reduced motivation or opportunities to perform.

In relation to matters of integrity, hierarchically restrictive schemas would propose that an individual with high integrity would perform honestly across all situations, whereas an individual with low integrity would perform honestly only when there were sufficient incentives to do so. As a result, a single act of honesty would not be considered a reliable indicator of integrity as both honest and dishonest people may engage in these acts. However, a single act of dishonesty would be considered indicative of low integrity, as only a person with low levels of integrity would act in a dishonest way. Therefore, and in contrast to competence-based violations, integrity-based violations have a stronger impact on trust and are typically harder to repair owing to the different ways in which people process positive and negative information.

2.4 Trust repair

Trust repair is concerned with ways in which to dampen the negative outcomes associated with trust violations, with the aim of restoring positive exchange (De Cremer, Van Dick & Murnighan, 2011). While it is generally accepted that trust is rarely repaired to its original level (Afifi, Falato & Weiner, 2001), research suggests that it may be repaired to a level in which future cooperation is possible, and acts of revenge or retribution that may come from low levels of trust are avoided. Acts that help to repair trust are classified as either non-substantive or substantive responses. Non-substantive responses are verbal accounts that aim to repair trust through responses such as an apology, denial, excuse and justification.
(Cody & McLaughlin, 1990; Kim et al., 2004; Tomlinson & Mayer, 2009).

Substantive responses are more behavioural in nature, and may include actions such as the introduction of rules, contracts, procedures and monitoring, which help constrain behaviour to prevent a trustee from acting untrustworthy (Sitkin & Bies, 1993).

2.4.1 Non-substantive response strategies

Non-substantive responses, such as an apology, justification and denial have dominated the trust repair literature. Studies have shown that a verbal response following a trust violation can be effective at dampening the resulting negative outcomes (e.g., Ohbuchi, Kameda & Agarie, 1989). Each response operates differently to impact the causal attributions a person (trustor) makes about the trustee’s actions, and in this way, have a differential impact on trust repair. An apology signals an acceptance of responsibility for a violation, and thus attributes the cause of the event internally. It involves communication of remorse and a promise to reform, which suggests that the trustee’s behaviour is unstable and therefore unlikely to happen again (Tedeschi & Norman, 1985). A denial rejects responsibility for the event, and provides a clear statement that the allegation is false (Cody & McLaughlin, 1990; Tedeschi & Norman, 1985). It attributes the cause of a violation to external factors in an attempt to reduce personal accountability. Similarly, excuses and justifications point to external factors by reframing actions in a more positive manner, or in accordance to higher goals or values (Tedeschi & Norman, 1985; Tomlinson & Mayer, 2009). When a trustee attributes an event to be out of their control it reduces the assignment of personal blame (Walster, 1966) so that the trustee is perceived more favourably (Tomlinson & Mayer, 2009), which increases the chance of pardon (Sitkin & Bies, 1993).
The effectiveness of non-substantive responses in repairing trust depends, in part, on the degree of personal culpability for the event. Coombs and Holladay (2002) propose that a violation of trust should be followed by an evaluation of responsibility for the event, before deciding upon the non-substantive response to employ. When little or no attributions of responsibility can be directed towards the trustee (e.g., a competence-based violation), a denial is effective. For moderate attributions of responsibility, excuses or justifications are more likely to effectively manage the situation. However, when the attribution of responsibility lies strongly with the trustee (such as with an integrity-based violation), an apology offers the most promise in re-building trust. This is due to the fact that an apology accepts responsibility and exerts remorse, actively demonstrating a commitment to reform.

Support for the effectiveness of an apology in repairing trust has been shown in a number of studies (Gill, Thompson, Febbraro & Barnes, 2010; Kellerman, 2006; Tomlinson, Dineen & Lewicki, 2004). Kim and his colleagues (2004) looked at the effects of an apology and denial on trust repair following a competence-based and integrity-based violation. They found that an apology was most effective in repairing trust following a competence-based violation and a denial was most effective in repairing trust following an integrity-based violation. Kim et al. explained this finding using the belief formation perspective (Reeder & Brewer, 1979), suggesting that a denial is more effective in cases of integrity-based violations as the belief that one lacks integrity is difficult to disconfirm once established. However, others have shown that an apology may be more effective than a denial following integrity-based violations. For example, Maddux, Kim, Okumura and Brett (2011) found that an apology repaired integrity-based violations, as manifested in greater trusting beliefs and trusting intentions. This was partly attributed to the fact that less blame towards
the trustee was implicated following an apology which allowed trust repair attempts to ameliorate. Gill et al. (2010) also found an apology to be more effective than a denial in the repair of trust, regardless of violation type, with greater evidence of this in the ‘real world’ and outside of a research context.

Tomlinson and colleagues (2004) argue that an individual should always admit culpability and apologise following a violation. An effective apology can positively influence the interpretation of another’s intentions behind an act (Ferrin et al., 2007), reduce aggression (Ohbuchi et al., 1989) and promote reconciliation through more favourable attributions about another’s actions (Kellerman, 2006; Tucker, Turner, Barling, Reid & Elving, 2006). An apology can also increase identification between parties by repairing a trustor’s faith in shared common goals, with both factors known to increase trust (Lewicki, 2006).

Despite the benefits associated with apology, research suggests that these are not the most common response following a transgression within organizations, but that justifications take this role (Coombs, 1999). Justifications attribute responsibility for an event to external sources to weaken causal links to the person’s character or stable disposition. In this way, they are argued to help repair trust as they allow a person’s actions to be accounted for by events outside of their control (Kelley & Michela, 1980; Pettersen, 1987). There is some evidence to support the positive effects of justification following an act of betrayal. Keltikangas-Jarvinen and Lindeman (1997) found that violations such as dishonesty and theft are more readily perceived to be acceptable when an individual justifies their actions as being performed under duress or when provoked. Similarly, Cauffman, Feldman, Jensen and Arnett (2004) found that acts of violence are accepted when they were justified as self-defence. A justification following an act of betrayal is considered acceptable
when there is evidence of a bad relationship between the trustor and the trustee, but least acceptable when an individual is thought of as being vindictive (Feldman & Cauffman, 1999), or acting in a way for self-protective reasons (Petersen, Petersen, & Seeto, 1983).

While some evidence supports the role of justifications in repairing relationships following a transgression, it is generally regarded as a less effective response following an act that signals a trust violation. Schlenker, Pontari and Christopher (2001) suggested that those who make justifications, and point to external causes following a violation, are generally perceived as deceptive, self absorbed, unreliable and having a flawed character. Furthermore, evolutionary psychologists have proposed that individuals are more likely to hold a person (e.g., a manager) accountable for an event, consequently attempts that attribute the cause to be external are likely to be resisted (Kim, Dirks & Cooper, 2009). From these studies it may be predicted that trust following an integrity-based violation will be higher when an apology is given, than when a justification is offered.

2.4.2 Substantive response strategies

Substantive responses to trust violations focus on implementing action that physically prevents a person from engaging in behaviours that signal a lack of integrity or competence. According to Janowicz-Panjaitan and Krishnan (2009), substantive responses are akin to legalistic remedies which relate to formal mechanisms that regulate behaviour, whereas non-substantive responses are akin to non-legalistic remedies that involve some form of social account to affect perceptions concerning the trustor. Studies have shown that substantive responses increase trust by averting untrustworthy actions by setting parameters around a person’s behaviour (Perrone, Zaheer & McEvily, 2003; Shapiro, 1987), which
ensures the reliability of future actions to be prototypical of a competent trustee, or one with integrity (Gillespie & Dietz, 2009; Turner, 1979). This promotes positive trust beliefs about the person (Kramer & Lewicki, 2010; McKnight et al., 1998; Sitkin & Roth, 1993), and a willingness to accept vulnerability and rely on the person in future situations (Nordgren, van Harreveld & van der Pligt, 2010).

Substantive responses can be differentiated into those that primarily aim to modify the system in which employees operate, and those that are directly aimed at modifying the individual’s behaviour. A typical system-focused substantive response is the introduction of a new procedure, which regulates how all employees approach a situation, or a given task. Individual-focused substantive responses are those directed at the trustee to promote a change in their character, and hence behaviour. These may include monitoring the person, imposing some form of formal discipline such as suspension, or implementing some other form of penance (Dirks et al., 2011; Nakayachi & Watabe, 2005; Slovic, 1993; Schweitzer & Ho, 2005). Research looking at the effectiveness of these substantive responses in trust repair is relatively limited. However, there is some indirect evidence that both classes of substantive responses may be effective in repairing employees’ trust.

Gillespie and Dietz (2012) demonstrated the effectiveness of implementing system procedures through a case study of a large engineering company. Following an accusation of systematic bribery, the company’s integrity was questioned and relationships with shareholders, investors, the general public and employees broke-down. In attempt to overcome negative relations, the company identified and implemented a system that detected and prevented unethical conduct, as well as serve as a benchmark for other companies. Gillespie and Dietz noted that the result of implementing this new procedure was an improvement in perceptions regarding
the company’s integrity. They proposed that the change in beliefs regarding the company’s trustworthiness was due to preventative measures that help suggest a commitment to best ethical practice. Similarly, in a study looking at individual-focused responses, Nakayachi and Watabe (2005) found that monitoring and self-sanctions of an organization following a dishonest event helped to repair public trust in the organization by increasing beliefs that it was trustworthy. At an interpersonal level, Dirks et al. (2011) found in a lab-based study that monitoring and penance were effective in repairing competence-based violations but less effective in repairing integrity-based violations. This, they argued, was due to individuals being less likely to accept vulnerability following an integrity-based violation. Dirks et al. suggested that more consideration is needed into how and when substantive responses can effectively repair trust following an integrity-based violation. It may be the case, for example, that in some cases substantive responses can have a positive impact on trust.

One factor that may influence whether or not a substantive response is effective in repairing trust following an integrity-based violation is the source of the response implementation; specifically whether it was implemented by the trustee (Dirks et al., 2011; Gillespie & Dietz, 2005; Janowicz-Panjaitan & Krishnan, 2009). This research suggests that voluntary responses (i.e., those initiated by the trustee) are more effective than involuntary responses (i.e., those initiated by a third party) as they lead to more personal attributions, and are seen as diagnostic of an individual’s commitment to refraining from future violations. Support for this suggestion comes from Nakayachi and Watabe (2005), who found that the voluntary introduction of sanctions and monitoring by the organization helped to repair trust in the organization. McCabe, Rigdon and Vernon (2003) also found when observing a trust
game, participants were more likely to reciprocate co-operative endeavours when the other party had chosen to co-operate voluntarily as opposed to them being forced. Further, Desmet and colleagues (2011) compared the effectiveness of voluntarily and involuntarily penance and found that penance effectively repaired trust when implemented voluntarily. When the size of penance was accounted for, a large voluntary compensation was more effective than a large involuntary compensation; however, a small voluntary compensation was less effective than a small involuntary compensation.

The implication of these findings is that substantive responses are effective in repairing trust as they offer a safeguard against future untrustworthy actions (Gillespie & Dietz, 2009). Further, when the trustee initiates the substantive response, they send strong signals about their commitment to reform and engage in trustworthy actions. Given that the latter has more impact on attributions made about the individual’s character, and that trust is influenced most strongly by a person’s actions, it may be predicted that a substantive response initiated voluntarily (i.e., by the trustee) will lead to higher levels of trust than a substantive response initiated by an external source.

2.4.3 Non-substantive vs. substantive response strategies

The effectiveness of substantive and non-substantive responses when considered together is under-explored. Empirical studies generally focus on one type or the other, with little consideration of their relative or additive effects. At a theoretical level, Lewicki (2006) proposes that providing some sort of reparation in addition to a non-substantive response may increase the latter’s effectiveness. A combined response offers more than what may simply be regarded as ‘cheap talk’, validating the claim offered by an apology that the trustee will not commit the act
again. Bottom, Gibson, Daniels and Murnighan (2002) partially confirmed this when they found that an apology and an offer of penance re-established co-operative behaviours following a breach, more than either response alone. They attributed this finding to the fact that both responses together had a stronger impact on trust repair by providing something to substantiate the apology as more than just ‘cheap talk.’ Desmet et al. (2011) confirmed this proposal when they found that providing penance in addition to an apology had a positive impact on trust. In their study, participants engaged in a trust game where a confederate failed to exchange money with the participant for self gain purposes. The results showed that trust was higher following the implementation of an apology and a financial compensation by the confederate, as opposed to an apology alone. They argued this was because a financial compensation helped to address the outcome related concerns and an apology helped the address the salient relational concerns, to effectively repair trust.

These studies suggest that non-substantive responses (specifically an apology), and substantive responses have an additive effect on trust. They operate together to increase the overall effect of a response on trust repair by offering a substantive demonstration of a verbal commitment to reform. It may also be argued, rather tentatively, that the loss imposed by a substantive response (e.g., freedom to act unsupervised, loss of finances) may be regarded as sufficient ‘pay-back’ for the initial transgression, thus making the trustee and trustor ‘even’ and able to re-build their relationship. However, what remains unknown from these studies are the relative effects of these responses (e.g., apology compared to a range of substantive responses), which research has yet to address across the trust repair literature.

2.5. Contextual influences on trust repair
A range of factors may impact the effectiveness of a trust repair response. Existing research has shown this in relation to violation type (competence- and integrity-based), where a response following one type of violation may be more effective than when it follows a different type of violation. A number of other factors exist that may be arguably as important as moderates of a trust repair response. These relate to the level of risk implicated in the transgression, or violation, the extent to which the trustor has been implicated in the event, and the status of the person engaging in the violation. While the focus of this research is primarily on ways to repair employees’ trust in supervisors following an integrity-based violation, it would also be useful to know how this compares to trust repair in management, which a number of published studies have focused on (e.g., Mayer & Davis, 1999; Schwartz, Kane, Joseph & Tedeschi, 1978, Webber, Bishop & O’Neill, 2012).

2.5.1 Risk

Risk relates to the outcome severity of an action. In regards to the current context, this was level of imposed harm to an employee or third party following a violation (Ferraro, 1995). Most research has considered a single risk outcome following an event and looked to see how trust repair responses operate in this context. However, there is some suggestion that the effectiveness of a response is moderated by the outcome of the transgression. Lewicki and Tomlinson (2003) proposed that following a severe transgression a trustee experiences more negative emotional reactions such as moral outrage, and is more likely to exact retribution. As a result, severe transgressions are thought to be more detrimental to employee trust than less severe transgressions, and require more substantial attempts to repair trust. Janowicz-Panjaitan and Krishnan, (2008) considered the severity of a transgression when deciding how to best formulate an effective trust repair strategy. They
suggested that following less severe transgressions, non-substantive responses can effectively repair trust. However, following more severe transgressions, substantive responses are required as they address the context-specific problem and specify requirements and contingencies related to tasks that help ensure trustworthy behaviour. Shapiro, Buttner and Barry (1994) provided empirical support for this proposal. In a study looking at factors that enhance the perceived adequacy of non-substantive responses, in particular explanations, it was found that explanations were less likely to be accepted when an individual had suffered a severe consequence. One implication from this research is that greater trust repair attempts will be required following a high-risk violation in order for trust to ameliorate.

2.5.2 Personal implication in the event

In addition to the level of risk involved in a violation, individuals also look at the degree to which they are adversely affected by a violation when qualifying attributions of the trustee (Jones & Davis, 1965). An individual is likely to be more adversely affected by an event when they are implicated in the violation (e.g., when management instructs an employee to carry out an act which does not comply with organizational policies or rules). In these cases, punishment may be warranted against both parties (Hoekema, 1991), in order to increase perceptions of justice amongst other employees. When an employee feels they have been ill treated, feelings of anger may emerge (Ben-Shakhar, Bornstein, Hopfensitz, & Van Winden, 2007; Bosman & Van Winden, 2002; Pillutla & Murnighan, 1996). At the same time greater perceptions of personal responsibility are likely, which may cause guilt (Nelissen & Zeelenberg, 2009). All of these factors are likely to cumulate, resulting in the requirement of greater trust repair efforts in order for the trustor to perceive
the benefits of engaging in a relationship with the trustee as greater than the level of risk involved.

2.5.3 Status of the transgressor

Employees hold multiple exchange relationships within organizations, drawing distinctions between co-workers and management, and within management between supervisors and managers (Becker, 1992). In regards to management, the level of trust that employees express towards supervisors is generally greater than the levels that they express towards senior managers (Mankin, 2004). This is attributed, in part, to the fact that employees have infrequent encounters with senior managers from which to draw inferences regarding their trustworthiness. In contrast, they deal with supervisors on a daily basis and so have a base from which to form reliable trust beliefs. Working closely with supervisors leads to higher levels of social exchange (Lavelle, Rupp & Brockner, 2007), shared perceptions of common goals (Reicher, 1985) and greater identification (Anthony 2005; Brewer & Kramer 1986; Simpson & Macy, 2004). Supervisors are likely to be regarded as more categorically ‘similar’ than distal managers (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which leads to favourable assessments regarding their trustworthiness (Brewer, 1996).

As a result of the differing levels of trust across hierarchical level, trust repair attempts may also differ. For example, high status individuals such as senior managers are expected to possess greater skills and motivation due to the higher hierarchical position they occupy (Ridgeway & Berger, 1986). When these individuals carry out a trust violation, greater substantive action may be required as they are often held more responsible, and evaluated more harshly than low status individuals (Hamilton & Saunders, 1981). This is partly based on the finding that rules are interpreted more strictly for high status individuals, and a violation at this
level is seen as more illegitimate. Wheeler, Weisburd and Bodenet (1982) found harsher punishment is also expected for high status individuals because of the exemplar they are supposed to set. Applied to the current context, this implies that greater trust repair attempts may be required for managers (i.e., in the form of a combined non-substantive and substantive response) than for supervisors.

2.6. Individual differences in trust repair

Whether or not trust may be repaired following a transgression will be strongly influenced by the response given. However, this repair process will also be subject to individual differences. These may relate to the person’s general propensity to trust, their identification with the transgressor, and their beliefs in a just world. All of these factors have been shown to influence the initial formation of trust (Burke, Sims, Lazzara & Salas, 2007; Han & Harns, 2010; Zuckerman & Gerbasi 1977). However, and surprisingly, they have evaded much research attention in the trust repair literature. Arguably, this may be considered an important omission as the true strength of non-substantive and substantive response in repairing trust can only be established when these other factors are controlled. The current research will address this by testing the effects of non-substantive responses and substantive responses when a number of individual differences are controlled.

A number of researchers have shown that trust propensity, defined by a person’s general willingness to trust others (Lugmann, 1979), is positively correlated with how much they trust specific others, including those that they have had no prior contact with (Burke et al., 2007; Colquitt, Scott & LePine, 2007; McKnight, Kacmar, & Choudhury, 2004). Individuals with a high propensity to trust see the good intentions in others, whereas individuals with a low propensity to trust see others as generally untrustworthy (Chughtai & Buckley, 2008). High trust propensity
is likely to facilitate trust repair as the individual is more likely to give the trustee a second chance following a violation (Dirks & Ferrin, 2002; Rotter, 1980). Further, these individuals exert high levels of trust irrespective of acts that signify low trustworthiness (Grant & Sumanth, 2009).

Another influential factor concerns how much the trustor identifies with the trustee. Identification is reflected in shared values (Gillespie & Mann, 2004) and has a positive relationship with trust (Han & Harns, 2010; Lewicki & Bunker, 1995; Shapiro et al., 1994). If a person identifies with another, they are more likely to seek harmony with them as that person’s successes or failures become their own personal interest (Tyler & Blader, 2000). Identification usually increases with high perceptions of similarity (Huang & Iun, 2006) and increased interactions (Brewer & Kramer 1986). In relation to trust repair, this suggests that we are more likely to trust those who we identify, even following a violation.

Trait trust, which refers to beliefs about another’s trustworthiness based on the various roles they occupy (Kramer, 1999), may have important effects on the trust repair process. When individuals occupy certain roles, positive stereotyping generates cognitive cues that influence trusting decisions (McKnight et al., 1998). For example, Dawes (1994) argued that “We trust engineers because we trust engineering and believe that engineers are trained to apply valid principles of engineering.....we have evidence every day that these principles are valid when we observe airplanes flying” (p. 24). Trust may also be more readily repaired in these individuals as more favourable assessments concerning their character is likely.

Finally, and in some situations, beliefs in a just world may play an important role in whether or not trust is repaired. Justice beliefs refer to an individual’s belief in a just world whereby everybody gets what they deserve (Lerner, 1965, 1980).
Dalbert (2002) found individuals who have high beliefs in a just world cope better in anger-evoking situations than individuals with low justice beliefs. They have higher general trust in others (Zuckerman & Gerbasi 1977), which is attributed to fact that these beliefs increase confidence and positive perceptions of others and makes for readily accepted interpersonal relations (Be’gue & Muller, 2006). In regards to employee trust in supervisors and managers, justice beliefs are likely to result in a substantive response being perceived as fairer. This is demonstrated in a study by Hafer and Olson (1998) which explored the relationship between beliefs in a just world and discontent with a situation. In this study participants were denied the opportunity to receive a bonus point required for a desired outcome. It was found that those participants high in justice beliefs were more likely to rate the procedures used to allocate the bonus point as fair in comparison to those participants with low justice beliefs. Other studies have shown that prisoners who believe in a ‘just world’ regard legal proceedings, treatment by prison officers and decisions on prison affairs as more just (Dalbert & Filke, 2007; Otto & Dalbert, 2005).

2.7 Trust repair vs. forgiveness

Some researchers have suggested that trust repair is simply forgiveness, and through this imply that they are the same thing (Haselhuhn, Schweitzer, & Wood, 2010; Vasalou, Hopfensitz, & Pitt, 2008). However, other researchers have cautioned against this. For example, Exline Worthington, Hill and McCullough (2003) warn researchers not to equate forgiveness with the repair of trust as although violations of trust can be forgiven, other past actions or inferences can impede upon the decision to trust again. For example, a woman in a domestically abusive relationship may choose to forgive the abuser as part of the process of psychological healing yet she may not allow the relationship to continue. Trust repair is only
possible when both parties attempt to rebuild a damaged relationship and settle disruptive issues. In such cases, feelings of anger and resentment are surrendered and amnesty is granted (Tomlinson & Lewicki, 2003). In order to ensure that what is being observed across the forthcoming studies is trust repair and not simply forgiveness (which does not guarantee trust), a measure of both trust and forgiveness will be taken.

2.8 Current study

The current research aims to address some of the gaps in knowledge highlighted in the previous sections in order to gain an insight into how employees’ trust in supervisors may be repaired following an integrity-based violation. The research focuses on integrity-based violations, as these are more common within industry (the context of the current research) than competence-based violations when performed by management (Farber & Weeks, 2001; Lofstedt, 2001). They are also the hardest to repair as reflected by the lack of certainty on the best approach to take to restore trust. First, the research will test the generalizability of findings from existing research, which has focused on student-based populations and general business contexts, in work settings defined as high-risk. In these contexts, the outcomes of a violation in trust may be acts that result in a near miss, to acts that result in accidents and injury. The generalisability of non-substantive responses (specifically apology and justification) will be examined, together with a number of substantive responses, which are largely underexplored.

Second, the research will examine if the effects of response strategies are moderated by the level of risk implicated in the event or the outcome to the trustor in relation to their degree of culpability in the event. The early studies in the Chapter will also compare the trust repair process for supervisors with that of managers in
order to show if employees make distinctions in the trust repair process, just as research suggests that they do for the trust formation process.

An overarching question that the current research aims to address is whether substantive responses add anything above and beyond what is offered by non-substantive responses in repairing trust. Existing research suggest that they have an additive effect and that both may be necessary when the outcome of the event is severe. However, how this effect plays out when different substantive responses are used is unclear. The first studies in this research will focus on the substantive response of a system-based preventative procedure. Implementing changes to an operating system is relatively common within industry. In these contexts, new procedures are implemented following feedback from employees regarding more efficient ways to complete tasks. They are also implemented following a breach to an existing procedure, which suggest the system to be flawed and susceptible to failure. The initial two studies will focus on the effectiveness of a procedure as these are commonly implemented within risk industries following a transgression by management (Amarasingham, Plantinga, Diener-West & Gaskin, 2009; Gillespie and Dietz, 2012). Latter studies will then show how a procedure compares to other substantive responses, in order to identify their relative effectiveness.

Drawing on the research cited above, it was predicted that:

Hypothesis 1: An integrity-based violation by a manager will result in lower trust (and forgiveness) than an integrity-based violation by a supervisor.

Hypothesis 2: Employees’ trust will be lower following an integrity-based violation classed as high-risk (more severe outcomes) than low-risk.
Hypothesis 3a: Employees’ trust (and forgiveness) following an integrity-based violation will be higher when an apology is given, than when a justification is offered.

Hypothesis 3b: A substantive response (procedure) implemented by the transgressor (i.e., supervisor) will be more effective at restoring employees’ trust than a substantive response implemented by the organization.

Combining these main effects in accordance with the suggestion that response strategies might be moderated by level of risk in the violation and the status of the transgressor, it may be predicted that:

Hypothesis 4a: Employees’ trust in managers following an integrity-based violation will be higher when an apology is given and a substantive response is implemented following the managers request, than when either response is presented alone. This effect is not dependent on the level of risk in the event.

Hypothesis 4b: The effect of response strategies on employee’s trust in supervisors following an integrity-based violation is moderated by risk. When risk is low, an apology is more effective than a substantive response. When risk is high, an apology and a substantive response is more effective than either response alone.
CHAPTER THREE

Methodology

In order to address the thesis’ research objectives, a mixed methods approach was employed. This involved the collective use of a number of different research methodologies from various paradigms, which together helped to provide a comprehensive understanding of trust erosion and repair. The methods used in this thesis are experimental vignettes, interviews, a questionnaire survey and a priming task. This Chapter begins by describing the purpose and benefits of adopting a mixed methods approach before outlining each of the individual methods in more detail.

3.1 Mixed methods approach

Trust is a multifaceted and complex construct therefore it is unlikely that a single research method will yield all of the information that is required to gain an in-depth understanding of it. A more detailed understanding is likely from a mixed-methods approach. A mixed-method approach involves the use of both quantitative and qualitative methods in order to combine the strengths of each method and offset any weaknesses (Creswell & Plano Clark, 2007). Quantitative methods can test theories and hypotheses, generate descriptive information, or examine causal relationships among variables (Harwell, 2011). However, these methods are deductive in nature, which results in a lack of information concerning situational context and meaning (Denzin & Lincoln, 2005). Qualitative designs overcome this limitation as they focus on discovering and understanding participant experiences as they occur naturally, imposing fewer boundaries (Hiatt, 1986). This offers a more flexible and open research process that is not confined to pre-existing constraints or theory. However, the data produced is not prescriptive or objective which can limit its replicability and generalizability (Tewksbury, 2009).
In the current thesis, the adoption of both quantitative and qualitative methods has its advantages. Quantitative methods can investigate causality between specific trust repair strategies and participants reported levels of trust. Qualitative methods can generate novel insights into effective trust repair strategies that have not been previously considered in the trust repair literature, by exploring participants’ experiences. The data produced can then be utilized in a number of ways. According to Creswell and Plane Clark (2011), methods can be integrated so that the results obtained from one method can be used to inform the focus and process of another. Additionally, data produced from the different methods can be combined to form part of a larger picture. In applying this to the current thesis, the results of the interviews can help provide the basis for the content of the questionnaire survey, and also indicate how employees’ responses to the vignettes are shaped. Furthermore, the vignettes, interviews and questionnaire survey can generate information about participants’ explicit trust, whilst the priming task can generate information about participants’ implicit trust.

A mixed method approach can therefore offer a number of important advantages in answering a research question, which ultimately lead to its utilization in this thesis over a succession of studies. It generates a well-rounded and informed understanding of trust erosion and repair through a number of methods, which although different in nature, endeavour to answer the same research objectives.

3.2 Experimental vignettes

Consistent with numerous studies on trust repair within the literature (Desmet, De Cremer & Van Dijk, 2011; Dirks, Kim, Ferrin & Cooper, 2011; Gill, Boies, Finegan & Mcnally, 2005; Kim, Diekmann & Tenbrunsel, 2003; Matilla, 2009), an experimental vignette method was used in four of the studies reported in
this thesis. Wilks (2004) defines vignettes as simulations of real life events that depict hypothetical scenarios to participants, who are asked to respond with their attitudinal responses to the scenario on a questionnaire (Renold, 2002). Vignettes take the term ‘experimental’ when certain factors are manipulated across scenarios to create ‘conditions’ that might be found in a laboratory setting (Bitner, 1990). Certain information is kept constant across conditions, which enhances construct validity, whilst the manipulation of variables enhances internal validity as causal relationships are more easily identified (Atzmüller & Steiner, 2010). The systematic variation of factors across scenarios allows for precise assessments of study variables, which may be confounded or otherwise difficult to manipulate in naturally emerging qualitative accounts (Alexander & Becker, 1978). As vignettes contain a scenario, it also minimizes the need for participants to impute their own contextual information (Frederickson, 1986). This prevents problems associated with direct questioning such as biased self reports when participants are required to make judgements that are often too abstract (Alexander & Becker, 1978).

Vignettes are less intrusive and threatening than other methods therefore they allow the exploration of issues or topics that are sensitive in nature (such as trust erosion). In some cases, Wirtz and Matilla (2001) suggest individual differences and experiences can influence people’s responses to a vignette. In regards to trust repair, for example, it may be found that responses are influenced by a person’s general trust propensity, trait trust, how much they identify with the target depicted in the scenarios, their experience with similar targets, and justice beliefs. These factors were therefore controlled for in each study.

In the studies described in this thesis, the number of vignettes presented to participants varied as a function of sample size. When studies contained large
samples sizes, participants received a single vignette. However, when the potential number of participants recruited for a study was limited, participants received more than one vignette each in order to ensure there were a sufficient number of responses in each of the different conditions. In cases where participants received more than one vignette, a mixed model analytical approach was employed to control for the fact that participant responses could not be treated as independent (Valiente, Lemery-Chalfant & Swanson, 2010). A mixed analytical approach partials out the dependency of two or more pieces of data that originate from the same person (Gayet-Ageron, Allegranzi, Attar & Pittet, 2011). In these models, factors, control measures and a random participant factor was entered into the model and significant variables identified.

The employment of vignettes provided a useful way in which to test the thesis’ hypotheses regarding the effectiveness of (non)-substantive responses in repairing trust and the influence of moderating factors. However, the vignette method was supplemented using approaches that allowed real experiences to be used as stimuli in order to offer a stronger test of ecological validity.

3.3 Interviews

Interviews were used to supplement the initial preliminary vignette studies that were carried out (and reported in the first two results Chapters). Specifically, semi-structured interviews were used to provide a greater understanding of trust erosion and repair from an employee’s perspective. This was important as in the existing trust literature there are limited number of studies that have been carried out in a risk context. Interviews could therefore allow the identification of additional factors that have not been previously accounted for. Cassell and Symon, (1994) propose that interviewing is one of the most productive ways to learn about an issue
as questions can be aimed towards those with direct experience which elicits a variety of informative responses. Additionally, as the experimental vignettes employed closed-ended questions, participants’ responses with this method are limited to pre-existing constraints (Fraenkel & Wallen, 1996). However, interviews are more inductive in nature and impose less restrictive classifications on the data. This allows a good understanding of an area to be gleaned from a relatively small number of participants (research has shown that saturation on a topic generally occurs around interview twelve; Guest, Bunce & Johnson, 2006). In addition to this, and unlike the vignette method, data is collected in a naturalistic setting which enhances ecological validity (Patton, 1980).

Semi-structured interviews fall between a structured and unstructured interview in terms of their flexibility. Although questions remain predefined, they are open-ended to generate enough scope to explore issues in more detail (Drever, 1995). This was important for the current thesis so that the information generated from the interviews did not depart from the original objectives of the research. To guide each interview, a protocol was used, in which questions were designed to uncover employees’ experience of events that led to a reduction of trust in management, the typical response of management to such an event, and what response or action management could have taken to improve the situation. Keeping the questions open-ended allowed both substantive and non-substantive responses to emerge. Employees were asked to recall examples of events, or specific actions to explicate their comments. In cases where employees could not give an example of an event, the interviewer provided one and employees were asked to comment on how they might feel and what actions management might take. The event described to participants was one which all employees could relate to. Further, the same example
was given in all interviews to ensure responses could be standardised. The data from these interviews were analysed using thematic analysis.

Thematic analysis identifies re-occurring themes within data, which through their frequency, are suggestive of being important to the topic under investigation (Daly, Kellehear, & Gliksman, 1997). This method was chosen over other qualitative analytical methods as the aim of the interviews was to identify dominant themes underlying trust erosion and repair, not to develop an overarching theory. Thematic analysis was particularly effective as it is not attached to implicit theoretical commitments, and has the flexibility of identifying themes or ideas that have not been previously considered (Namey, Guest, Thairu, & Johnson, 2007). Consistent with Braun and Clarke’s (2006) suggestion for identifying themes, familiarization with the data set was required (re-reading transcripts and repeatedly listening to the recordings). Each transcript was coded line-by-line to facilitate a micro-analysis of the data and describe the content of a single line of the transcript. The codes indicated what was important about that snippet of data. Discovering patterns among the codes and categorizing them into meaningful groups enabled themes to then be generated.

In addition to identifying factors that may be absent from the general trust literature, qualitative methods also allow other methods to be validated. For example, Chapter 7 study used a single focus group to provide evaluative feedback regarding the realism of the vignette that was to be used in the main study in that Chapter. Gill, Stewart, Treasure and Chadwick (2008) suggest the utilization of more than one qualitative technique such as one-to-one and group interviewing in order to improve the validity of results and ensure answers are not influenced by pre-conceived ideas or leading questions. Focus groups are also time effective as questions can be
addressed to the group as a whole which encourages interactions between participants so that experiences are more readily shared (Kitzinger 1996). This is done more willingly than in one-to-one interviews as focus groups are perceived as less intimidating which prompts greater discussion (Shaha, Wenzel & Hill, 2011). A group dynamic can also encourage greater discussion as comments made by other participants can facilitate memories and participants can build upon and reply to others’ comments which leads to greater clarity (Tewksbury, 2009). As a result, focus groups often generate the same type of information produced in one-to-one interviews, but when implemented successfully and interaction is facilitated, they can provide more in-depth information.

The use of qualitative methods in this thesis therefore served a number of important purposes. First, they helped inform the content of subsequent methods as they revealed trust repair strategies, in particular, substantive responses, that had not been previously considered within the trust literature as potentially important in repairing trust. Second, they provided evaluative feedback on the information provided in some of the vignettes in regards to their clarity and relevance to an employee sample. Third, they generated background knowledge and scope to explain how employees’ responses to the initial vignettes may have been shaped, as well as confirming previously drawn conclusions from the vignette questionnaire. The qualitative methods were then supplemented with a questionnaire survey. The aim of this was to quantify the findings of the interviews over a larger sample.

3.4 Questionnaire survey

A questionnaire survey was used to test the effectiveness of a range of trust repair strategies, including those that had not been previously considered but were identified as important across the interviews. Specifically, it allowed responses
highlighted in the interviews to be tested in a more controlled way, and the relative effects of factors to be compared in a quantitative sense. In the study, participants were required to state if management (specifically their immediate supervisor) had engaged in a “wrong-doing” over the past 6 months and if so, whether they had implemented any of the different non-substantive and substantive responses that were presented to them (and taken from interview data). These responses were then correlated to reported levels of trust in this target.

The questionnaire survey helped establish the relative importance of a number of non-substantive and substantive response strategies which was not possible in the vignette method due to the number of conditions it would have created. It also provided three main advantages when compared to qualitative designs. First, it was less intrusive, but shared with it the ability to draw on actual events in the workplace when seeking to understand trust repair. Second, a larger sample size could be recruited due to less imposing time constraints. This counteracted any problems associated with subjectivity and the replication of findings (Bryman, 2008). Finally, it exerted some control over participants’ responses with the use of quantifiable measures that were more objective than the interviews. The questionnaire survey therefore provided a further test of the robustness of results (Buskens & Raub, 2009).

3.5 Priming task

A priming task was used to supplement the previous methods by exploring trust reduction and repair after a real-time event. The method adopted a longitudinal approach such that participants’ trust (implicit and explicit) was measured at two different time points: before and after a work placement. The aim of this was to identify whether trust had changed over time as a result of an event. This
methodology offers developments to the vignette method, which only considered hypothetical events and events that occurred at a single time point. It also develops the questionnaire survey and interview methodology as these methods only explored events that had occurred in the past.

In order to ensure changes in participants’ trust could be attributed to an event, a questionnaire was used in which participants were asked to state whether during their placement a target (e.g. supervisor) had acted in an untrustworthy way. Prompts were used to establish further details about the event described, such as whether it was related to a lack of competence or integrity, was a high or low-risk event and if the target was ultimately responsible. This ensured that all factors of interest within the thesis were captured and subsequently explored.

The priming task also complimented previous methodologies by also exploring how implicit trust beliefs were affected following an event in which trust was reduced. This provided access to unconscious mental associations that would be difficult to assess with explicit measurements (Bosson, Swann & Pennebaker 2000; Wilson, 2002) such as in vignettes, the interviews and the questionnaire survey. Furthermore, research suggests that implicit and explicit beliefs are distinct entities (Fazio et al., 1995; Greenwald, McGhee & Schwartz, 1998) and produce different types of information. Explicit measures are predictive of deliberate controlled behaviour and implicit measures are predictive of impulsive behaviour (Friese, Hofmann & Wanke, 2008). Exploring implicit and explicit beliefs can therefore provide a more complete understanding of trust, its erosion and repair.

Although a number of different methodologies exist to measure implicit beliefs (e.g., Implicit Association Test; Greenwald, McGhee & Schwartz, 1998 and Sequential Priming; Neely, 1977), an adaption of the Bona Fide Pipeline (BFP;
Fazio, Jackson, Dunton & Williams, 1995) method was used. The BFP is a well-known implicit measurement and a more straightforward technique to use than others. It is also the only method to have been previously adapted to measure implicit trust (see Burns, Mearns & McGeorge, 2006). The BFP was tailored to fit the context of the current study such that fewer time constraints and less fatigue were placed upon the employee sample than in the original Bona Fide Pipeline measurement. The task looked at the extent to which the presentation of multiple attitude-objects (e.g., supervisors, managers) automatically activated an associated evaluation in memory (trust or distrust). The use of such indirect measurements are less susceptible to response biases than explicit measures whereby participants may overestimate trust or respond in socially desirable ways (Fazio & Olson, 2003). In such cases, participants’ responses may not reflect their true attitudes, but a deliberate conscious manipulation to generate favourable impressions (Dunton & Fazio, 1997; Plant & Devine, 1998). When applied to trust, this may result in participants expressing high levels of trust in management so that they are portrayed as trusting individuals or for fear of repercussions. Implicit measurements can minimize these problems and highlight differences between conscious and unconscious attitudes. For example, Burns et al. (2006) measured implicit and explicit trust in employees in a UK gas plant and found participants expressed high explicit trust for management, although their implicit trust in these same targets were a lot lower.

This priming task also provided additional information concerning ways in which to repair implicit beliefs, which research suggests are more fixed than explicit beliefs (Gregg, Seibt & Banaji, 2006; Petty, Tormala, Brinol, & Jarvis, 2006; Rydell & McConnell, 2006). This helped identify whether greater substantial action was
required in order to repair implicit trust compared to explicit trust. To date, no other studies have identified how trust repair strategies impact upon both beliefs.

In conclusion, four methods are used across six empirical studies to provide a broad and rich understanding of trust erosion and repair. First, experimental vignettes are used to systematically vary factors across scenarios to allow for the assessment of study variables. Second, interviews are used to provide an in-depth understanding of trust erosion and repair from an employee perspective, highlighting factors that are absent from the general trust literature. Third, a questionnaire survey tests the effectiveness of trust repair strategies identified as important in the interviews with more quantifiable measures. Finally, the priming task allows the exploration of trust following a real time event and explores implicit trust beliefs, which are distinct and less malleable than explicit beliefs. The utilization of these methods can provide different types of information, each with their own unique qualities that lead to greater inferences about the nature and magnitude of thesis’ findings. This provides a strong rational for the combination of a mixed methods approach in answering the research objectives.
CHAPTER FOUR

The Repair of Employee Trust across Hierarchical Levels

This Chapter presents the results of the first study testing the role of a substantive response (preventative procedure) versus a non-substantive response (apology) in repairing employee trust in management following an integrity-based violation. It offers a preliminary test of the thesis’ hypotheses and addresses some of the gaps in existing research by examining the role of these repair strategies when the outcome of the violation has minor negative effects, and when the outcome of the violation has more severe effects. The study also explores whether managers and supervisors should be treated as distinct groups when testing for the effects of the repair strategies. The hypotheses were tested using data from 164 UK gas employees who were asked to read and respond to a vignette describing an event shown to reduce employee trust in management. The methods and results of this study are presented in the following sections, followed by a discussion of their implications.

4.1 Method

4.1.1 Participants & procedure

Participants were 164 employees recruited from the UK gas industry (55 office-based staff, 53 refinery-based and 56 offshore-based). One hundred and fifty-five participants were recruited from a single gas company and the remaining 9 participants were recruited from internet-based forums. Of the sample, 33 (20.1%) were contracted employees and 87 (53%) were employed directly by the operating company (44 participants did not disclose this information). The sample comprised 117 males (71.3%) and 18 females (11.0%) (29 participants did not disclose their gender). Participants represented the occupational groups of technicians (24.1%; electrical, instrument, lab, maintenance, operations, production and rope access.
technicians), engineers (16.3%; drilling, integrity, shift, mechanical and project engineers), platers (3.1%), and miscellaneous roles (e.g., accountant, chemist, craftsman, inspector). On average, participants had been working in the gas industry for 18.6 years \((SD = 11.19)\), working under their current supervisor for 4.41 years \((SD = 5.0)\) and working under their current manager for 4.27 years \((SD = 5.26)\). One hundred and six participants held frontline positions (64.6%) and 13 (7.9%) held management positions (45 participants did not disclose their role). Although the study was interested in how to repair trust in management, those occupying management roles were given the opportunity to participate provided that they had a line manager to whom they reported. Independent t-tests showed no significant differences on any outcome measures between these two groups \((ps > 0.05)\), suggesting that aggregation to a single sample was appropriate.

Participants were approached at their worksite, or via internet discussion forums aimed at oil and gas employees (www.workingoffshore.co.uk), and asked to participate in a study on working relationships and attitudes towards safety. All of those approached agreed to participate and were given a questionnaire and consent form to complete on site and during work time. These participants were surveyed in groups of no more than fifteen people (average group size = 9), in a private room. A researcher was present during the completion of the questionnaire to answer any questions. Participants recruited from internet forums were emailed an information sheet and consent form and were asked to return the completed questionnaire using the same medium (i.e., via email)\(^1\). A check was carried out to ensure participants’ responses did not significantly differ across locations. The results of an ANOVA

\(^1\) Participants were recruited from internet forums in order to increase sample size and provide greater power to the results.
showed that location did not have a significant effect on any of the outcome measures ($ps > 0.05$).

4.1.2 Experimental task

To study the effects of substantive and non-substantive responses on participants' trust, an experimental vignette method was used. As discussed in Chapter 3 (section 3.2), this is the preferred method in studies of trust repair because it offers an ethical way of studying trust violations as they may occur in the ‘real-world’ as they are less intrusive (Kerlinger, 1986). This method also provided a good preliminary test of the hypotheses as factors pertaining to the employment of a (non)substantive response and moderating factors could be manipulated across scenarios to create ‘conditions’ that might be found in a laboratory setting (Bitner, 1990). The study also explored the effects of substantive and non-substantive responses on participants’ forgiveness, in order to distinguish its effects from trust. A different pattern of results would suggest that trust is indeed distinct from forgiveness.

To test study predictions, information on four independent factors was manipulated to give a total of twenty-four vignettes. These factors related to: Non-substantive response (apology/justification), Substantive response (voluntary procedure/ involuntary procedure/ no action), Target (supervisor/manager), and Risk (low/high). Risk was operationalized by whether or not the action of management resulted in an injury to an employee (Ferraro, 1995). Injury was classed as high risk and no injury was classed as low risk. Participants responded to up to four vignettes, which was necessary to ensure adequate power for the analysis. The vignettes described a supervisor or manager violating a safety procedure in order to speed up production. The actions of management resulted in an injury (or no injury) to an
employee. This type of event has been shown in previous research to lead to a reduction of employee trust in management (e.g., Conchie & Donald, 2008; Kivimaki, Kalimo & Salimen, 1995), and to be a relatively common event within industry thus increasing its ecological validity. Participants were presented with the following initial information:

It’s been over a year since you started working for this company. On one particular day, your [supervisor/manager] wanted to speed up production and so knowingly violated a safety procedure to achieve this. It’s well known that this violation increases the risk of an accident (see Appendix B for complete vignette).

Stating that the member of management knowingly violated the procedure conveyed important negative information to the participant, specifically that there was intent behind the event as opposed to incompetence (i.e., not knowing they had actually violated a procedure). Intentionality conveys important information about another’s integrity and when it relates to a negative event, reduces integrity trust beliefs (Desmet, De Cremer & van Dijk, 2011; Rousseau, Sitkin, Burt & Camerer, 1998; Schoorman, Mayer & Davis, 2007). The vignette also made explicit that the violation was known to increase the probability of an accident in order to avoid employees’ drawing conclusions that the violation to the procedure was harmless, and so the act described in the event was ‘normative’ or acceptable.

A single event rather than a history of events was used in the scenario as research shows that a single incident of dishonest or immoral behaviour is strong enough for a person to categorise another as generally untrustworthy (White & Eiser,
2006). Further, research shows that a single event that violates a person’s expectations about another’s trustworthiness is sufficient to significantly reduce trust (Dirks & Skarlicki, 2004; Grover, Hasel, Manville & Serrano-Archimi, 2011; Lewicki & Wiethoff, 2000; Slovic, 1993).

To control for any order effects on responses, each participant received a random ordering of vignettes, which were ordered using the online statistical software tool Research Randomizer (Urbaniak & Plous, 2007). This tool uses a JavaScript random number generator to produce customized sets of random numbers, which provided the necessary information on presentation order. The order in which participants received the vignettes did not significantly influence responses on the outcome measures ($ps > 0.05$).

4.1.3 Manipulations

Information concerning the event was held constant across all vignettes. However, the management target, the outcome of the event, and the response given by management was manipulated.

Target. When describing the event, participants were informed that the act was committed by a supervisor or by a manager. To make the vignette more personal, participants were informed that the supervisor was called Dave and the manager was called Pete.

Risk. Immediately following the description of the event, participants were given information regarding the level of risk involved in the event. In the low-risk condition, participants were informed that nobody was injured following the violation of the safety procedure. In the high-risk condition, participants were informed that an employee was injured as a result of the event.
Non-substantive response. Following information on the level of risk in the event, participants were informed about the target’s non-substantive response to the event. In the apology condition, the member of management apologized for the event, expressed remorse and promised that it would not happen again. In the justification condition, the member of management did not take responsibility for the event and instead offered justifications for their behaviour.

Substantive response. After the description of the non-substantive response, participants were informed that a preventative procedure had been put in place in response to the violation (i.e., a procedure that would prevent a similar event from occurring in the future), as suggested by the supervisor/manager or by the company. In the no action condition, participants were informed that no procedure had been put in place.

Outcome Measures

After reading each vignette, participants were asked to state their trust beliefs, trust intentions, intentions to voice and forgiveness towards the member of management described in the vignette. All responses were recorded on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7).

Trust beliefs. Trust beliefs were measured using six items taken from Mayer and Davis (1999). Three items were used to measure participants’ beliefs about the target’s ability and three items were used to measure participants’ beliefs about the target’s integrity. An example item from the ability scale is ‘X [target] is very capable of performing their job’ (α = .86). An example item from the integrity scale is ‘X [target] is honest’ (α = .72).
Trust intentions. Trust intentions were measured using three items adapted from Mayer and Davis’ (1999) Trust Intentions scale. Example items are ‘I would be comfortable having X [target] make decisions that critically affect me’ and ‘I would be comfortable for X [target] to make decisions that affect me, without oversight by others’ (α = .88).

Intention to Voice. Intention to Voice was used as a specific example of a trust intention. This was measured using the four highest loading items from LePine and Van Dyne’s (1998) Voice scale. These items measure acts of communication, such as speaking up and listening to others. Example items from the scale are, ‘I would communicate my views about work issues to X [target] even if they disagreed with me’ and ‘I would speak up to X [target] with workplace issues and encourage others to get involved’ (α = .75).

Forgiveness. Forgiveness was measured using a single item ‘I would forgive X [target].’

Control Measures

Information was collected on a number of individual difference measures, which were taken before participants read the vignette, and have been shown to influence employee trust beliefs and intentions in work contexts. These related to participants’ general propensity to trust, trait trust, identification with management, and industry tenure (Aryee, Budhwar, & Chen, 2002; Conchie & Donald, 2009; Kramer, 2010; Lewicki & Bunker, 1996). Studies have shown that trust in another is higher if the person investing trust has a higher predisposition to trust (i.e., has a trusting personality), has developed trust in a similar target from previous

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2 Three items were omitted from the original scale; two prior to inclusion as they demonstrated poor reliability in risk-related contexts (Conchie & Burns, 2009) and one after inclusion due to poor reliability with other items.
interactions, identifies with the target’s goals and values, or has shorter experience within an organization. Research also suggests that voice behaviours may be influenced by a person’s general willingness to engage in these behaviours. To control for this, data were collected on general voice behaviour. Unless otherwise stated, responses to control measures were recorded on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7).

**Trust Propensity.** Trust propensity was measured using three items taken from the International Personality Item Pool (Goldberg, 1999). The scale measures a person’s general willingness to trust other people, and has previously demonstrated good reliability and validity (Jackson, Colquitt, Wesson & Zapata-Phelan 2006). Example items are ‘I trust others’ and ‘I trust what people say’ ($\alpha = .86$).

**Trait Trust.** Trait trust was measured as an individual’s general trust in management using the single item ‘I trust X [target] with safety.’ The item was made specific to safety as the vignette described a safety-specific violation.

**Identification.** Participants’ general identification with a manager or supervisor was measured using three items adapted from the Organizational Identification Scale (OIS; van Knippenberg, Knippenbreg, Monden & de Lima, 2002). The items measure how much a participant believes that they share the same values and goals with a target. Example items are ‘I strongly identify with X [target]’ and ‘I feel strong ties with X [target]’. (Supervisor identification, $\alpha = .88$; Manager identification, $\alpha = .85$).

**General Voice.** General voice behaviour was measured using the same four items as Intention to Voice. The general voice measure was taken before participants

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$^3$ Two items were omitted from the scale after inclusion as they demonstrated poor reliability with other items. 
were presented with the vignettes and therefore presented separately from the Intentions to Voice items ($\alpha = .87$).

*Years in Industry.* Years in industry were measured in months and years.

*Safety Compliance.* Personal safety compliance was added as an extra control measure as previous research shows that those who breach safety procedures might be more tolerant or less sensitive to unsafe acts (Swartz & Douglas, 2008), and by default, show less of a reduction in trust following an unsafe act. Safety Compliance was measured using five items from Rundmo’s (1997) Safety Compliance scale, which assesses self-reported safety compliance through behaviours such as breaking safety rules and taking chances. The scale has established reliability and validity (Mearns, Hope, Ford & Tetrick, 2010), and has been used extensively within industry. Example items from the scale are ‘*I take chances to get the job done*’ and ‘*I ignore safety procedures to get the job done*’ ($\alpha = .87$).

### 4.2. Results

#### 4.2.1. Manipulation checks

Three manipulation check questions were used to ensure that participants had successfully recognised the level of risk, non-substantive response and substantive response within the vignette. Participants were asked to specify whether ‘*X [target] violated a procedure which: Did/ Did not lead to an injury*’; ‘*X’s [target] response to the violation was to: Justify his behaviour/Apologize*’; and whether ‘*A procedure was put in place as requested by: Target/Company/No procedure was put in place.*’ Participants answered each question by circling one of the response options given. Examination of the data showed that of the 472 vignettes completed, 440 responded correctly to the non-substantive response question, 6 responded incorrectly and 26 failed to provide an answer. The substantive response manipulation check resulted in
398 correct answers, 49 incorrect answers and 25 missing. Finally, for the risk manipulation check 436 responded correctly, 8 incorrectly and 28 failed to provide an answer.

A different pattern of results emerged when these ‘incorrect’ cases were included in the analysis and so they were removed to ensure more reliable results. Participants who failed to provide an answer to the manipulation checks were also removed from the analysis as significant differences were found between this group and those who answered the manipulation check correctly on all trust outcome measures (ps < 0.05). This left 330 cases to be used in the main analysis.

As an additional check to ensure that the high-risk condition was seen as more severe, participants stated how much they agreed that ‘The violation was severe’ on a scale from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7). The results showed that severity ratings were significantly higher for those in the high-risk group (M = 5.68, SD = 1.24) than in the low-risk group (M = 5.06, SD = 1.27), t_{328} = 4.04, p < 0.001, d = 0.41.

In order to test that the violation had effectively led to a reduction in trust, related samples t-tests comparing employees’ mean level of trust towards management before they had read the vignette, with the mean level of trust reported in management after reading the vignette were carried out. The results show that participants’ ability beliefs; t_{329} = 26.38, p < 0.001, d = 1.34; integrity beliefs; t_{329} = 29.19, p < 0.001, d = 1.49, and trust intentions; t_{329} = 27.50, p < 0.001, d = 1.39 were significantly lower after reading the vignette. Further, participants’ integrity beliefs

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4 If the vignette described a manager in the scenario, the level of trust participants reported in the manager after reading the vignette was compared to their level of trust reported towards their own managers before reading the vignette. A similar procedure was carried out for vignettes concerning supervisors.
were significantly lower than their ability beliefs; $t_{329} = -13.85, p < 0.001, d = 0.69$
which supports the integrity-based nature of the event used (see Table 4.1 for means and SD’s before and after participants had read vignette).  

4.2.2 Validity testing

Prior to the main analyses, Confirmatory Factor Analysis (CFA) was carried out to test the construct and discriminant validity of the outcome trust measures. A multi-level CFA was conducted to test the validity of the outcome measures relating to trust. This controlled for the clustered structure in the data, which was caused by each participant responding to more than one vignette (and so having more than one set of data relating to the outcome measures). A standard CFA was conducted to test the validity of the control measures. Given that each participant only responded to these measures once, it was not necessary to control for any clustering in these data.

The results of a multi-level CFA showed a moderate fit to a five-factor model in which all outcome measures were independent (e.g., ability beliefs, integrity beliefs, trust intentions, intentions to voice, forgiveness), $\chi^2_{68} = 139.43, p < 0.001; CFI = 0.96, RMSEA = 0.05$. All item loadings were significant with an average range of $r = .73 - .93$. The results in Table 5.2 show that the five-factor model provides a better fit than a four-factor model in which trust beliefs (ability and integrity) are combined (Model 2), a three-factor model in which trust intentions are combined (trust intentions and intentions to voice) (Model 3), and a two-factor model in which trust beliefs and trust intentions are combined (Model 4). These results support the construct and discriminate validity of the five outcome measures.

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5 Data had been previously screened using histograms to ensure the data were normally distributed. Further, one data point presented as an outlier (i.e., more than 3 SD’s away from the mean) for the outcome measure of intentions to voice and was removed from the analysis.
The results of a CFA for the control measures shows a moderate fit to a five-factor model in which all control measures are independent (trust propensity, trait trust, identification\(^6\), general voice, safety compliance) \((\chi^2_{126} = 204.79, \ p < 0.001; \ CFI = 0.95, RMSEA = 0.06)\). All item loadings were significant with an average range of, \(r = .57 - .90\). Further, the results shown that the five-factor model provides a better fit than a four-factor model in which trust propensity and trait trust are combined \((\chi^2_{130} = 596.86, \ p < 0.001; \ CFI = 0.70, RMSEA = 0.15; \Delta \chi^2_4 = 392.07)\), a three-factor model in which trust propensity and trait trust are combined, as are safety compliance and general voice \((\chi^2_{133} = 809.96, \ p < 0.001; \ CFI = 0.57, RMSEA = 0.18, \Delta \chi^2_7 = 605.17)\) and a single factor model in which all control measures are combined \((\chi^2_{136} = 1406.94, \ p < 0.001; \ CFI = 0.19, RMSEA = 0.24, \Delta \chi^2_{10} = 1202.15)\). These results support the construct and discriminate validity of the

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\(^6\) Identification in a supervisor and identification in a manager were combined to represent identification with management as a whole as the items were the same in both measures. A similar procedure was carried out for trait trust.
control measures and suggest five distinct constructs of trust propensity, trait trust, identification, general voice and safety compliance.

4.2.3. Hypothesis testing

Hypotheses 1-4 were tested using mixed model analysis, which comprised four fixed factors, six control measures\(^7\), and a random participant factor. Modelling

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\(^7\) The identification and trait trust variables in each model were specific to the target in the vignette. For example, if the participant was responding to a scenario relating to a supervisor, their identification and trait trust score for their supervisor were included in the model. If the participants were responding to a scenario relating to a manager, only their identification and trait trust score for their manager was included.
Table 4.3  
Means, standard deviations and correlations between study variables

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<th>Variable</th>
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<td>2 Integrity Trust Beliefs</td>
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<td>3 Trust Intentions</td>
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<td>4 Intentions to Voice</td>
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<td>5 Forgiveness</td>
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<tr>
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<td>5.50</td>
<td>1.04</td>
<td>.09</td>
<td>.03</td>
<td>.04</td>
<td>.12*</td>
<td>.26**</td>
<td>.12*</td>
<td>.82**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Manager</td>
<td>5.41</td>
<td>1.03</td>
<td>.00</td>
<td>-11*</td>
<td>-.04</td>
<td>-.01</td>
<td>.17**</td>
<td>.24**</td>
<td>.84**</td>
<td>.66**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>1.14</td>
<td>.17**</td>
<td>.03</td>
<td>.03</td>
<td>.06</td>
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<td>.53**</td>
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<td>Supervisor</td>
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<td>.04</td>
<td>.04</td>
<td>-.18**</td>
<td>-.14**</td>
<td>-.05</td>
<td>.11*</td>
<td>.12*</td>
<td>.10*</td>
<td>.17**</td>
<td></td>
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<tr>
<td>Manager</td>
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<td>6.87</td>
<td>.02</td>
<td>.04</td>
<td>.05</td>
<td>.00</td>
<td>.05</td>
<td>.05</td>
<td>.13*</td>
<td>.11*</td>
<td>.14**</td>
<td>.11*</td>
<td>.01</td>
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<tr>
<td>10 General Voice Behaviour</td>
<td>5.11</td>
<td>.84</td>
<td>.08</td>
<td>-.12*</td>
<td>-.12*</td>
<td>.06</td>
<td>.51**</td>
<td>.17**</td>
<td>.33**</td>
<td>.34**</td>
<td>.37**</td>
<td>.42**</td>
<td>.06</td>
<td>-.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Safety Compliance</td>
<td>1.95</td>
<td>.95</td>
<td>.03</td>
<td>.16**</td>
<td>.13**</td>
<td>.09</td>
<td>-.20**</td>
<td>-.23**</td>
<td>-.31**</td>
<td>-.39**</td>
<td>-.30**</td>
<td>-.30**</td>
<td>-.13</td>
<td>-.04</td>
<td>-.41**</td>
<td></td>
</tr>
<tr>
<td>12 Years in Industry</td>
<td>18.6</td>
<td>11.19</td>
<td>-.13*</td>
<td>-.02</td>
<td>.01</td>
<td>-.12*</td>
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<td>-.04</td>
<td>-.01</td>
<td>-.01</td>
<td>.00</td>
<td>-.12*</td>
<td>.22**</td>
<td>.09</td>
</tr>
</tbody>
</table>

Note. N = 147.  * p < 0.05, ** p < 0.01, *** p < 0.001
participant as a random factor controlled for the clustered structure of the data caused by each participant responding to more than one vignette. Data were analysed using R statistical software (Bates & Maechler, 2009) and Monte Carlo method sampling was used to obtain p-values, as recommended by Sanborn and Griffiths (2008).

Control measures were checked for co-linearity prior to the main analysis (average association, \( r = .03 \); range -.41 to .53, see Table 4.3) to ensure variables were not highly correlated with one another. Results showed a moderate relationship between the measures of identification and trait trust (\( r = .53 \)), identification and general voice (\( r = .42 \)), and general voice and safety compliance (\( r = -.41 \)). These measures were mean-centred prior to the main analysis to control for high co-dependency (Preacher, Curran, & Bauer, 2006). Each outcome measure was regressed on all control measures, in addition to the study variables. Any non-significant control measures were removed from each model after the first stage of testing to produce a simple solution and increase statistical power.

This initial stage of testing identified a number of control measures that were not significantly related to the outcome measures. Specifically, model comparisons showed an improvement in model fit for the outcome measure of integrity beliefs when trait trust, trust propensity and years in industry were removed from the model:

\[ \Delta \chi^2_3 = 173.55, \ p < 0.001 \]; an improvement in model fit for trust intentions when trait trust, trust propensity, identification and years in industry were removed: \( \Delta \chi^2_4 = 154.77, \ p < 0.001 \), and an improvement in model fit for intentions to voice when trait trust, identification, trust propensity, years in industry and safety compliance were removed: \( \Delta \chi^2_5 = 138.92, \ p < 0.001 \). No significant improvements were found for ability beliefs when the non significant predictors of trait trust and trust propensity
were removed: $\Delta \chi^2_2 = 0.63, p > 0.05$, or forgiveness when trait trust, identification and safety compliance were removed: $\Delta \chi^2_3 = 0.73, p > 0.05$. However, to increase statistical power all non significant predictors were removed from the analysis.

The results of model testing showed a main effect for target, non-substantive response, and risk on trust and forgiveness; but a non-significant main effect for substantive responses. In partial support of H1, an integrity-based violation performed by a manager resulted in significantly lower forgiveness ($M = 3.78, SE = 0.09$) than a violation by a supervisor ($M = 4.09, SE = 0.09$) ($b = -0.40, SE = 0.23, t = -1.79, p < 0.05$). However, no differences emerged for trust outcomes. In partial support of H2, a high-risk violation resulted in significantly lower ability beliefs ($b = -0.52, SE = 0.19, t = -2.75, p < 0.05$); integrity beliefs ($b = -0.58, SE = 0.16, t = -3.71, p < 0.001$), and trust intentions ($b = -0.57, SE = 0.16, t = -3.57, p < 0.001$) compared to a low-risk violation. No significant differences emerged for intentions to voice or forgiveness (see Table 4.5 for mean values).

In support of H3a, an apology resulted in higher ability beliefs ($b = 0.51, SE = 0.15, t = 3.33, p < 0.01$); integrity beliefs ($b = 1.04, SE = 0.14, t = 7.67, p < 0.001$); trust intentions ($b = 0.64, SE = 0.14, t = 4.63, p < 0.001$); intentions to voice ($b = 0.42, SE = 0.11, t = 3.75, p < 0.01$), and forgiveness ($b = 0.92, SE = 0.23, t = 4.07, p < 0.01$), than a justification (see Table 4.4 for mean values). However, in contrast to H3b, a voluntary procedure was no more effective at repairing trust than an involuntary procedure. An unplanned analysis to test if substantive responses, per se, were effective when compared to no substantive response showed a main effect for ability beliefs ($b = 0.20, SE = 0.09, t = 2.33, p < 0.05$). A substantive response (irrespective of who initiated it) resulted in higher ability beliefs than no response. Further, H4a predicted that target would moderate the effects of a response.
Specifically, when a violation involved a manager, an apology and a voluntary procedure would be more effective than either response alone. In contrast to this, the results of model testing showed a significant effect for risk. When the risk was high, an apology and a voluntary procedure was more effective than an apology alone in repairing integrity beliefs ($b = 2.60$, $SE = 0.98$, $t = 2.65$, $p < 0.01$ Figure 4.3) and trust intentions ($b = 1.68$, $SE = 1.01$, $t = 1.67$, $p < 0.05$; Figure 4.4). Additionally, an apology and a procedure (irrespective of who implemented it) resulted in greater intentions to voice than an apology alone ($b = 1.47$, $SE = 0.68$, $t = 2.18$, $p < 0.05$; Figure 4.5). When the risk was low, an apology and a voluntary procedure was no more effective than an apology alone ($p > 0.05$).

H4b predicted that when the target was a supervisor, risk would moderate the effects on a response, such that an apology alone is effective when the risk is low. When the risk is high, an apology alone is less effective than an apology and a procedure. The results showed no such effects following a low-risk violation ($ps > 0.05$). However, a significant interaction between Substantive Response X Risk was found in the hypothesized direction such that no substantive action following a low-risk violation was associated with higher integrity beliefs ($b = 0.42$, $SE = 0.20$, $t = 2.15$, $p < 0.05$; Figure 4.1) and trust intentions ($b = 0.53$, $SE = 0.21$, $t = 2.53$, $p < 0.01$; Figure 4.2) than following a high-risk violation, and significantly lower integrity beliefs and intentions following a high-risk violation. No significant difference within and between the substantive responses was found at either low or high-risk. The results also shown a significant Target x Risk x Non-Substantive Response x Substantive Response interaction; when the risk was high and the violation involved a supervisor, an apology and a procedure (irrespective of who implemented it) was more effective than providing an apology alone in the repair of
integrity beliefs ($b = 2.53, SE = 0.85, t = 2.98, p < 0.05; Figure 4.3) and trust intentions ($b = 2.27, SE = 0.86, t = 2.64, p < 0.05; Figure 4.4). Additionally an apology and an involuntary procedure were most effective at increasing intentions to voice ($b = 1.47, SE = 0.68, t = 2.18, p < 0.05; Figure 4.5). These results show that an involuntary procedure is effective in repairing trust when the violation concerns a supervisor. However, in contrast to this, when the violation concerns a manager, a voluntary procedure is required.

In addition to these effects, the results show that participants’ trust beliefs are predicted by how much they identify with the target ($b_{ability} = .08, p < .05; b_{integrity} = .10, p < 0.05$), their self-reported levels of safety compliance ($b_{ability} = .15, p < .05; b_{integrity} = .28, p < 0.001$), and years in industry ($b_{ability} = -.01, p < .05$). Trust intentions are predicted by safety compliance ($b = 0.17, p < 0.01$), and forgiveness is predicted by years in industry ($b = -.01, p < .05$), and trust propensity ($b = 0.34, p < 0.01$). Finally, intention to voice was significantly predicted by general voice behaviours ($b = 0.60, p < 0.001$).

4.3. Discussion

This study set out to do two main things. First, it sought to identify the role of a non-substantive and a substantive response in the repair of participants’ trust in management following an integrity-based violation with differing levels of risk (severity). Second, it sought to identify whether supervisors and managers should be treated as distinct groups when testing for the effectiveness of trust repair strategies. The results showed that participants do not discriminate between managers and supervisors when making trust judgments. One possible explanation for this finding is that participants were drawing on role-based knowledge when evaluating
Table 4.4

Means and standard errors for non-substantive responses on all outcomes measures

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Non-substantive Response</th>
<th>Mean</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability Beliefs</td>
<td>Apology</td>
<td>3.80</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Justification</td>
<td>3.33</td>
<td>0.07</td>
</tr>
<tr>
<td>Integrity Beliefs</td>
<td>Apology</td>
<td>3.44</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Justification</td>
<td>2.43</td>
<td>0.07</td>
</tr>
<tr>
<td>Trust Intentions</td>
<td>Apology</td>
<td>2.75</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Justification</td>
<td>2.18</td>
<td>0.07</td>
</tr>
<tr>
<td>Intentions to Voice</td>
<td>Apology</td>
<td>5.14</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Justification</td>
<td>4.95</td>
<td>0.07</td>
</tr>
<tr>
<td>Forgiveness</td>
<td>Apology</td>
<td>4.24</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>Justification</td>
<td>3.60</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Table 4.5

Means and standard errors on trust outcome measures in relation to the level of risk implicated.

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Risk</th>
<th>Mean</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability Beliefs</td>
<td>Low</td>
<td>3.71</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.44</td>
<td>0.07</td>
</tr>
<tr>
<td>Integrity Beliefs</td>
<td>Low</td>
<td>3.03</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.88</td>
<td>0.08</td>
</tr>
<tr>
<td>Trust Intentions</td>
<td>Low</td>
<td>2.58</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.37</td>
<td>0.07</td>
</tr>
</tbody>
</table>
Figure 4.1: Two-way Interaction between Substantive Response * Risk on Integrity Beliefs.

Figure 4.2: Two-way Interaction between Substantive Response * Risk on Trust Intentions
Figure 4.3: Four-way Interaction between Target * Risk * Non-substantive * Substantive Response on Integrity Beliefs

Figure 4.4: Four-way Interaction between Target * Risk * Non-substantive * Substantive Response on Trust Intentions
their trust in the target (Dawes, 1994). According to Kramer and Lewicki (2010), people’s knowledge or beliefs about a role that a person occupies leads to positive expectations regarding their behaviour. As both managers and supervisors are in a position of responsibility, employees may expect both to display exemplary behaviour. A violation from either a supervisor or a manager would therefore hinder such positive expectations and may lower trust in both targets.

In contrast to reported levels of trust, participants were more likely to forgive a supervisor than a manager following a violation. This finding supports the notion that forgiveness is distinct from trust (Enright, Gassin & Wu, 1992; Freedman, 1998), and that the strategies that may lead to an improvement in one, may be ineffective for the other (Exline, Worthington, Hill, & McCullough, 2003). At a
theoretical level, the results suggest that trust and forgiveness represent different levels of repair. According to Tomlinson, Dineen and Lewicki (2004), forgiveness may be restored following a verbal response of an apology. To repair trust, however, requires demonstrations that the person is reliable as the consequence of betrayed trust is more substantial.

Consistent with the trust repair literature, the results showed the importance of an apology over a justification. An apology resulted in significantly higher levels of trust and forgiveness than a justification, which research attributes to the fact that an apology is indicative of planned behaviour change (Kim, Dirks & Cooper, 2009), is taken as a display of remorse (Philpot & Hornsey, 2008), and helps to build favourable impressions following an integrity-based violation (Pfarrer, Decelles & Smith, 2008). In contrast to what was predicted, a voluntary substantive response was no more effective than an involuntary substantive response in repairing participants’ trust and forgiveness. This contrasts with the findings of Dirk, Kim, Ferrin and Cooper (2011), who found that a voluntary substantive response helped repair trust, as it was seen as diagnostic of an individual’s commitment to avoid future violations. One possible explanation for this difference lies in the nature of the substantive response considered in each study. In the current study, the substantive response of a procedure was examined. Preventative procedures (as discussed in Chapter 2) have been shown to be effective in improving trust due to the fact that they physically prevent a person from carrying out a violation (Gillespie & Dietz, 2012). In these cases, we might expect at the very least for employees to show a greater willingness to rely on others (i.e., have higher trust intentions) owing to the safeguards in place. In contrast, monitoring only deters a person from carrying out a
violation, based on the knowledge that someone is checking their work. Monitoring cannot physically prevent an untrustworthy act.

The results also showed that following a low-risk violation, trust was easier to repair than following a high-risk violation. According to Tomlinson et al. (2004) willingness to reconcile is affected by the severity of a transgression. When a violation is less severe, reconciliation increases because the probability of a future violation decreases. This suggests that regardless of the trust repair response given, the chances of reconciliation will increase following a low-risk violation. This was supported by findings which show that following a low-risk violation by a supervisor and a manager, an apology was just as effective as a procedure in repairing trust and forgiveness. This suggests that when the risk is low, either an apology or a procedure may help repair damaged relations. An apology and a procedure although different on the surface level, may help to repair low-risk violations as they operate through the same mediator of perceived repentance (Dirks et al., 2011). This suggests that as long as the response displays perceived repentance, trust can be repaired as it signals a commitment to reform and prevents a similar event from occurring in the future (Desmet et al., 2011).

When the outcome of the violation is high-risk, substantive action is more effective than non-substantive action in repairing trust. Specifically, an apology augmented the effects of a procedure to help repair integrity beliefs, trust intentions and intentions to voice in both targets. This supports research which suggests that greater trust repair efforts are required when the risk is high. For example, O'Malley and Greenberg (1983) manipulated severity violation and looked at its effect on reparation. It was found that when a violation was more severe (violator caused major financial damage to a car), greater punishment was recommended by
participants than when the violation was less severe (minimal financial damage to the car). According to Shapiro, Buttner and Barry (1994), non-substantive responses are less effective when a person has suffered severe consequences. Bennett and Earwaker (1994) also empirically tested the effectiveness of apologies under different conditions of outcome severity in conflict resolution and found that there was a greater inclination to reject an apology following a severe outcome. Providing both an apology and a procedure may be seen to match the severity of the violation, which increases the likelihood of trust repair (Goffman, 1971) as substantive action validates the apology as sincere (Schwartz, Kane, Joseph & Tedeschi, 1978).

According to Bottom, Gibson, Daniels and Murnighan (2002), substantive action addresses a different form of trust than an apology therefore providing both responses together adds an additional level of trust required following a high-risk violation.

It was also shown from the results that although a voluntary substantive response was no more effective than an involuntary substantive response in repairing participants’ trust and forgiveness, differences emerged when higher order interactions were examined. Specifically, when the violation concerned a supervisor and the risk was high, a voluntary or involuntary procedure combined with an apology effectively repaired integrity beliefs and trust intentions. When the violation concerned a manager, a voluntary procedure was more effective than an involuntary procedure. This finding is consistent with research that proposes trust repair responses should vary in accordance to hierarchical target (Janowicz-Panjaitan & Krishnan, 2008). A voluntary and involuntary procedure may be equally effective when directed by, or towards, a supervisor, as there may be a greater need to maintain a relationship with a supervisor than a manager. Employees work closely
with supervisors, which could ultimately lead to greater interdependence (Emerson, 1962). As a result, a procedure in place may safeguard against future violations, and lead to greater trust irrespective of who implemented the procedure. On the other hand, employees interact less with managers, having less daily dependency on them (Perry & Mankin, 2004). It is also possible that managers may violate new procedures as they have nobody monitoring them in the same way that supervisors do. Consequently, greater sincerity may be required from a manager such as providing an apology and a voluntary procedure which would signal a greater commitment to preventing a future violation, reducing the risk associated with trusting the manager (Gillespie & Dietz, 2009).

In addition to the main factors of interest, the study identified a number of individual factors that have some impact on peoples’ trust following an integrity-based violation. First, positive trust beliefs and intentions were more likely among those who report less personal compliance with safety. One possible explanation for this is that these participants regarded the violation in the vignette as more normative, and attached less diagnostic weight to the actions in terms of the target’s trustworthiness. If true, this group would be expected to report higher levels of trust. Positive beliefs were also found for those who identify with the target, and those with a shorter tenure within industry. Generally, employees with a short tenure emphasise the positive aspects of their work, such as management’s positive behaviours, whilst focusing less on their negative behaviours (Gkorezis, Hatzithomas & Petridou, 2011). Finally, forgiveness was higher among those with a greater trust propensity. According to McKnight and Chervany (2001, 2002) high trusting individuals are likely to be less critical of others and also are more forgiving of their mistakes. Interestingly, however, being more trusting generally does not lead to
higher trust beliefs following an integrity-based violation. This suggests that regardless of how trusting individuals are, following an integrity-based violation trust will reduce.

**Limitations & Future Directions**

The results provided here offered the first preliminary test of the study’s hypotheses. To build on these findings, it would be useful to know if the results replicate in a different risk context, and if they remain stable when management implicate employees in the act that signalled a lack of integrity. The next chapter will address these two issues. It will also make the purpose of the procedure more explicit and in doing so, address the fact that a large number of people in this study incorrectly answered the substantive response manipulation check.

**Conclusion**

This study is one of the first to empirically test the importance of voluntary and involuntary substantive responses in the repair of integrity-based violations under different conditions of risk and across hierarchical levels. The study also empirically tests the effects of these responses with an actual sample of employees. The results show that both an apology and a procedure are equally effective at repairing trust following low-risk violations. Further, following high risk-violations an apology can augment the effects of a procedure to repair trust. The study also found that hierarchical level should be accounted for when framing the substantive response. Voluntary responses are more effective in the repair of trust in a manager. However, when the violation concerns a supervisor, the source of the procedure (self or other imposed) is less important. These findings contribute to the small amount of empirical research showing the importance of a substantive response in trust repair.
CHAPTER FIVE

The Repair of Trust in a Healthcare Context

To expand on the results reported in the previous Chapter, a second study was carried out within a healthcare context. The aim of this study was to test the generalizability of the results obtained in the first study. Specifically, this Chapter retained the focus on the effects of a non-substantive response and substantive response under different levels of risk, but provided an insight into whether the effectiveness of the responses varies depending upon whether or not the employee is implicated in the act that signalled a lack of integrity by management. This will shed further light on the conditions under which non-substantive and substantive responses are effective in repairing employee trust. The Chapter begins with a short description of the importance of trust in healthcare, followed by the results of the study and their implications.

5.1 Introduction

5.1.1 The Importance of trust in healthcare

Medical errors are estimated to account for between 48,000 and 98,000 deaths each year (Kohn, Corrigan & Donaldson, 1999). These errors can result from poor communication, lapses in technique, individual judgement or errors embedded in the delivery of medical care (Murphy, Stee, McEvoy, & Oshiro, 2007). It has been suggested that one way to reduce error rates is through open communication, such as employees reporting mistakes, challenging opinions openly and making constructive suggestions for change (O’Daniel & Rosenstein, 2008). Such ‘voice’ behaviours are effective at reducing medical errors as they identify the underlying factors or problems that can lead to a medical error and they can help to promote organizational learning (Kohn et al., 1999). Research suggests that voice behaviours
within health domains may be facilitated by employee trust in senior figures. Vogelsmeier and Scott-Cawiezell (2009) for example, found that team members’ trust in nurse leaders helped facilitate open communication and dialogue about error disclosure, which allowed for more effective problem solving regarding their occurrence.

Trusting relationships between staff members within healthcare has also been shown to promote collaborative working relationships, which has been proposed to improve positive patient outcomes (Barrere & Ellis, 2002). Positive patient outcomes include reduced length of hospital stay (Tschannen & Kalisch, 2009), reduced death rates (Knaus, Draper, Wagner & Zimmerman, 1986) and increased satisfaction amongst patients (Lindeke & Sieckert, 2005). These outcomes can be attributed to increased contribution provided by a number of professionals, allowing decisions to be based on more informed and complete information (Uddin & Hossain, 2012). The importance of high-quality, trusting relationships, has been supported by Fox, Costie and Pickering (1992), who found that poor quality interpersonal relationships, defined by absent communication amongst nurses and physicians, led to multiple errors during surgical procedures.

Despite the benefits that employee trust in management may have within the healthcare domain, research has shown that trust within this sector is low and reducing (Rowe & Calnan, 2006). One possible reason for this reduction is a lack of honesty and integrity shown amongst healthcare professionals, as indicated through acts such as failing to disclose medical errors, withholding information and poor treatment integrity (Greshem, Gansle & Noell, 1993; Rathert & Phillips, 2010). There is now an increasing need to address the reduction of employee trust caused by such behaviour, however, to date, research has focused solely on the repair of
relationships between patients and medical professionals (e.g., Mazor et al., 2004, 2006) with non-substantive responses (e.g., an apology). The study reported in the following sections starts to address this void by focusing specifically on interpersonal relationships amongst staff, and the role of substantive responses in achieving this goal.

5.2 Method

5.2.1 Participants & procedure

Participants were 171 student nurses recruited from 2 Universities in the North West of England: 109 from University A and 62 from University B. Thirty-eight participants were first year students (22.2%), 32 (18.7%) were second year students, and 95 (55.6%) were third year students, all of whom specialised in general adult care nursing. There were 151 females (88.3%) and 13 males (7.6%; 7 participants did not disclose this information). The distribution of gender is broadly representative of the nursing population, which on the whole is largely female dominated (England, 2011). The sample had a mean age of 23.5 years (SD = 5.8), with an average of 1.75 years experience working on a hospital ward (SD = 1.12). An independent samples t-test showed that University affiliation did not have a significant effect on any of the outcome measures (ps > 0.05). Furthermore, a one-way ANOVA revealed that there were no significant differences in outcome measures based on students year group (ps >0.05)

Participants were therefore considered as a single sample.

Participants were approached as a class during the beginning of a lecture and given a verbal summary of the study followed by an information sheet outlining the

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Data had been previously screened using histograms to ensure the data were normally distributed. No points presented as an outlier (i.e., more than 3 SD’s away from the mean) for any of the measures.
confidentiality and anonymity of their responses. Once participants were aware of the study’s aims they were given the option to take part. Those who volunteered to participate were given a questionnaire to complete within the first 10 minutes of the lecture. They were instructed to complete the questionnaire alone, without conferring with those around them. Once they had completed the questionnaire, participants were debriefed about the study’s aims and reminded that they could withdraw their data at a later point if they wished to do so. Students who did not wish to take part in the study had the opportunity for a quick break before the lecture started.

5.2.2 Experimental task

The effects of non-substantive and substantive responses on employees’ trust were tested using the same experimental vignette design as in Chapter 4. This method required participants to read a short vignette (scenario) about a senior nurse (i.e. supervisor) who engaged in an act of negligence that signalled a lack of integrity.

To explore whether the effects of non-substantive and substantive responses would be moderated by personal involvement in the event, two events were used. One event described only the senior nurse acting negligently (non-implicated condition) and the other described the senior nurse and a student nurse acting negligently (implicated condition). Participants were asked to imagine that they were working with the senior nurse described in the events. In the non-implicated condition, the integrity-based violation focused on a senior nurse failing to follow hospital protocol in an attempt to reduce workload. Participants were presented with the following initial information:
A senior nurse wanted to rush things along and in doing so, did not check a patient’s hospital/NHS number, date of birth or name from their wristband, before administering medication. It was later revealed that the senior nurse was rushing because she did not want to work any later than her scheduled hours of work.

In the implicated condition, the integrity-based violation focused on a senior nurse attempting to reduce her workload by delegating a task to a student nurse despite knowing that the student nurse lacked the training and competence to complete the task. Participants were presented with the following initial information:

A senior nurse wanted to rush things along and so asked you (the student nurse) to give a subcutaneous injection (e.g., Fragmin or Insulin) while she dealt with another patient—even though you (the student nurse) had not been appropriately trained for this. It was later revealed that the senior nurse was rushing because she did not want to work any later than her scheduled hours of work) (see Appendix C for the complete vignette).

These events were adapted from the healthcare literature and interviews with qualified nurses. The literature suggests that these types of events reduce a nurse’s integrity because the nurse is acting negligibly and in a way which compromises their normal code of conduct (Buttell, Hendler & Daley, 2007; Hunter, 2008; Joel, 2003; Thomka, 2007; Westbrook, Rob, Woods, & Parry, 2011). Interviews with four qualified nurses (1 male staff nurse, 2 female senior nurses, and 1 female matron)
offered support to this suggestion. Actions that were described within the interviews as leading to a lack of trust in a senior nurse included skipping hospital procedures and protocols in order to reduce workload to get things done quicker. The drop in trust associated with these events was attributed to the fact that senior nurses are in a position of responsibility (particularly when acting as a supervisor to student nurses), and are expected to lead by example; with their primary concern being to ensure the safety of patients. When senior nurses act negligently they violate these expectations by compromising patient safety.

After the presentation of the event information, participants were presented with details on the level of risk in the event (low/high), the non-substantive response (apology/justification) and substantive response (voluntary procedure/ involuntary procedure/no action). Risk was defined by the possibility that the event or action could lead to an adverse effect for the patient (Hemaida, 1995). In this study this related to whether or not the action of the senior nurse resulted in a medical error.

Varying information on these three factors resulted in a total of 12 vignettes for each vignette type, of which each participant was presented with two. To control for order effects, each participant received a random combination of the vignettes (one implicated and one non-implicated vignette), using the same online statistical software tool as in the previous study. The order in which the vignettes were

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2 Two of the nurses interviewed specialised in general adult care nursing and two were community nurses, who had previously spent time working on a hospital ward. On average, the interviewed participants had 11.25 years (SD = 9.11) experience working on a ward. Participants were recruited through word-of-mouth using the researcher’s contacts within the nursing profession. NHS ethical approval was obtained prior to interviewing nurses. Each interview lasted approximately 40 minutes. Participants gave consent for the interview to be digitally recorded and later transcribed. They were informed that the transcript would mask identifying information, and were given the opportunity to view their transcript.
presented did not significantly influence responses on any of the outcome measures ($p_s > 0.05$).

5.2.3 Manipulations

Risk. Immediately following description of the event, participants were given information regarding the level of risk involved in the event. In the low-risk condition, participants were told that the correct patient received the medication (non-implicated event), and that the student nurse gave the injection correctly (implicated event). In the high-risk condition, participants were respectively informed that the wrong patient received the medication, and that the student nurse administered the injection incorrectly.

Non-substantive response. Following information on the risk, participants were informed about the senior nurse’s non-substantive response to the event. In the apology condition, the senior nurse apologized for the event, expressed her remorse and promised that it would not happen again. In the justification condition, the senior nurse did not take responsibility for the event and instead offered justifications for her behaviour.

Substantive response. Finally, participants received information on the substantive response. They were informed that a procedure had been put in place, which physically prevented and safeguarded employees against a similar event occurring in the future, and that this action came following a request by the senior nurse (voluntary) or the hospital (involuntary). Those in the control condition were informed that no procedure had been put in place (no action).
Outcome Measures

After reading each vignette, participants were asked to rate their trust beliefs, trust intentions, intentions to voice and forgiveness in the senior nurse.

Trust Beliefs, Trust Intentions, Intentions to Voice, & Forgiveness. Trust beliefs, trust intentions, intentions to voice and forgiveness were measured using the same scales as in Chapter 4 (Section 4.1.3). Specifically, trust beliefs were measured using six items taken from Mayer and Davis (1999) (ability: $\alpha = .88$; integrity: $\alpha = .83$); trust intentions were measured using three items taken from Mayer and Davis (1999) ($\alpha = .82$); intention to voice was measured using four items from Lepine and Van Dyne’s (1998) voice scale ($\alpha = .84$) and forgiveness was measured with a single item, ‘I would forgive this senior nurse’. All items were responded to on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7).

Control measures

Trust Propensity, Trait Trust, Identification, General Voice, Experience on a Hospital Ward. These control variables were measured using the same scales as in Chapter 4 (section 4.1.3). Trust propensity was measured using five items taken from the International Personality Item Pool (Goldberg, 1999) ($\alpha = .80$). Trait trust was measured with a single item ‘I trust senior nurses with patient safety’; Identification with a senior nurse was measured using three items adapted from the OIS (van Knippenberg, van Knippenbreg, Monden, & de Lima, 2002) ($\alpha = .66$); General voice was measured using four items from LePine and van Dyne’s (1998) voice scale ($\alpha = .83$) and experience on a hospital ward was measured with a single question asking how long the student nurse had spent working on placements in hospitals. This measure was taken using the unit of weeks, months and years.
5.3. Results

5.3.1 Manipulation checks

To test the realism of the events described in the vignettes, a subsample (n = 62) of those who participated in the main study were asked a series of questions tapping this issue. Participants strongly agreed that ‘A situation like this could happen in real life’ ($M_{\text{non-implicated}} = 6.02, SD = 1.02; M_{\text{implicated}} = 5.59, SD = 1.20$; based on a 7-point agreement scale); they agreed that ‘These events often happen in hospitals’ ($M_{\text{non-implicated}} = 4.89, SD = 1.26; M_{\text{implicated}} = 4.59, SD = 1.41$); however, they neither agreed nor disagreed that they have worked with a senior nurse who has acted in this way ($M_{\text{non-implicated}} = 3.75, SD = 1.75; M_{\text{implicated}} = 4.20, SD = 1.55$).

All participants used in the study (171 participants) responded to two statements regarding whether or not they believed the act was under the senior nurse’s control and responsibility. This was important to ensure that the event was attributed to the senior nurse and not to external pressures. For both events, participants agreed that ‘The senior nurse was responsible for the event’ ($M_{\text{non-implicated}} = 5.45, SD = 1.44$) ($M_{\text{implicated}} = 4.96, SD = 1.49$) and ‘The senior nurse had control over what happened’ ($M_{\text{non-implicated}} = 5.12, SD = 1.54$) ($M_{\text{implicated}} = 4.87, SD = 1.47$). Additionally, to check if the high-risk condition was seen as more severe, participants responded to the statement ‘The violation was severe’ on a 7-point scale ranging from ‘Very Strongly Disagree’ (1) to ‘Very Strongly Agree’ (7). Results show that the high-risk event was rated as significantly more severe than the low-risk event for the implicated event ($M = 5.25, SD = 1.30$ vs. $M = 4.64, SD = 1.24$) ($t_{143} = 2.94, p < 0.01, d = 0.49$), but not for the non-implicated event ($p > 0.05$). The pattern of results in the non-implicated event was in the direction expected ($M_{\text{high}} = 5.28, SD$...
= 1.25, \( M_{\text{low}} = 4.91, \text{SD} = 1.51 \), but the difference failed to reach statistical significance.

All participants responded to three checks to establish if they had correctly identified the response strategies and level of risk within each vignette. Participants were asked to indicate if ‘The senior nurse violated a procedure which: Led to a medication error/Did not lead to a medication error’; ‘What was the senior nurse’s response to the violation: To justify her behaviour/To apologize’; and if ‘A preventative procedure was put in place to safeguard against similar events occurring as requested by: The senior nurse/The hospital/No procedure was put in place.’ For the non-implicated vignettes, 131 participants correctly identified the level of risk, 13 incorrectly identified risk and 27 provided no response. One hundred and thirty-three correctly identified the non-substantive responses, 7 were incorrect and 31 failed to provide a response, and 130 correctly identified the substantive response, 10 were incorrect and 31 failed to respond. In the implicated vignettes, 140 participants correctly identified the level of risk, 8 incorrectly identified risk and 23 provide no response. One hundred and thirty-one correctly identified the non-substantive responses, 7 were incorrect and 35 failed to provide a response, and 129 correctly identified the substantive response, 9 were incorrect and 33 failed to respond.

Independent samples t-tests revealed that those who responded correctly to the manipulation checks showed significant differences from those who responded incorrectly on all outcome measures \( (ps < 0.05) \). Those who failed to provide an answer showed no significant differences from those who responded correctly. These cases were included in the main analysis, while those who incorrectly identified the
manipulation were removed. This resulted in 141 cases for the non-implicated event and 145 for the implicated event to be included in the main analysis.

To check if the violation resulted in a significant reduction in participants’ trust, reported levels of trust pre-event and post-event were compared. For the non-implicated event, participants reported significantly lower ability beliefs: $t_{140} = 9.19$, $p < 0.001$, $d = 0.81$; integrity beliefs: $t_{140} = 12.47$, $p < 0.001$, $d = 1.17$ and trust intentions: $t_{140} = 9.02$, $p < 0.001$, $d = 0.78$ after reading about the event. In the implicated vignette, the same pattern of results emerged for ability beliefs: $t_{145} = 9.64$, $p < 0.001$, $d = 0.80$; integrity beliefs: $t_{145} = 12.47$, $p < 0.001$, $d = 1.04$ and trust intentions: $t_{145} = 8.77$, $p < 0.001$, $d = 0.73$ (See Table 5.1 for Means). The results show that integrity beliefs in the senior nurse were lower than competence beliefs post event, for both the non-implicated event ($t_{133} = 4.99$, $p < 0.001$, $d = 0.43$) and the implicated event ($t_{145} = 3.93$, $p < 0.001$, $d = 0.33$). This supports the integrity-based nature of the events described.

5.3.2 Validity testing

Confirmatory Factor Analyses (CFA) were carried out to test the construct and discriminant validity of the measures. A multi-level CFA was conducted to test the validity of the outcome measures relating to trust and forgiveness and a standard CFA was conducted to test the validity of the control measures. A multi-level CFA showed a moderate fit to a five-factor model in which all outcome measures were independent (e.g., ability beliefs, integrity beliefs, trust intentions, intention to voice, forgiveness), ($\chi^2_{68} = 134.51$, $p < 0.001$ CFI = 0.96; RMSEA = 0.06). All item loadings were significant and ranged between, $r = 0.68 – 0.94$. Further, shown in Table 5.2, the five-factor model provides a better fit to the data than a four-factor model in which trust beliefs (ability and integrity) are combined (Model 2), a three-
A CFA of the control measures shows a moderate fit to a four-factor model in which all control measures are independent (trust propensity, trait trust, identification, general voice) ($\chi^2_{39} = 73.29$, $p < 0.001$; CFI = 0.94; RMSEA = 0.07). All item loadings were significant and ranged between, $r = 0.50 - 0.94$. This model offered a better fit than one in which trust propensity and trait trust are combined ($\chi^2_{42} = 277.99$, $p < 0.001$; CFI = 0.61; RMSEA = 0.18, $\Delta \chi^2 = 204.70$, $p = 0.001$) and a single factor model in which all control measures are combined ($\chi^2_{45} = 584.15$, $p < 0.001$; CFI = 0.12; RMSEA = 0.27; $\Delta \chi^2 = 510.86$, $p = 0.001$). These results support the construct and discriminate validity of the control measures.

5.3.3 Hypothesis testing

Hypotheses 2 to 4 were tested using a mixed model analysis comprising four fixed factors (inc. event type), five control measures, and a random participant factor. Prior to the main analysis, control measures were checked for co-linearity (average association, $r = .03$; Range $r = -.28$ to $.52$; see Table 5.3). Results show a moderate relationship between trait trust and trust propensity ($r = .33$), which were mean-centred prior to the main analysis to control for co-linearity. In the first step of the analysis, each outcome measure was regressed on all control measures. Non-significant control measures were removed from each model to produce a simple solution and increase statistical power. A comparison between the original model and the model with the non-significant control measures removed showed an improvement in model fit for the outcome measure of ability beliefs when trust
propensity and experience on ward were removed: $\Delta \chi^2 = 80.92, p < 0.001$; an improvement in model fit to integrity beliefs when trust propensity and identification were removed: $\Delta \chi^2 = 11.62, p < 0.01$; an improvement in trust intentions when trust propensity, trait trust and identification were removed: $\Delta \chi^2 = 19.27, p < 0.001$, and an improvement in intentions to voice when identification and experience on ward were removed: $\Delta \chi^2 = 51.38, p < 0.001$. No significant improvement was found for forgiveness when identification was removed: $\Delta \chi^2 = 2.32, p = 0.87$. To increase statistical power all non significant predictors were removed from the analysis.

Table 5.1

Means and standard deviations for outcome measures pre and post event

<table>
<thead>
<tr>
<th>Event</th>
<th>Outcome Measure</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>5.16</td>
<td>1.60</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>3.53</td>
<td>1.08</td>
</tr>
<tr>
<td>Ability Beliefs</td>
<td>Before</td>
<td>4.57</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>3.22</td>
<td>1.10</td>
</tr>
<tr>
<td>Integrity Beliefs</td>
<td>Before</td>
<td>3.97</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>2.98</td>
<td>1.00</td>
</tr>
<tr>
<td>Trust Intentions</td>
<td>Before</td>
<td>3.96</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>After</td>
<td>3.09</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Non-implicated</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Implicated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5.2.

Multi-level CFA results for outcome measures

<table>
<thead>
<tr>
<th>Model</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>CFI</th>
<th>RMSEA</th>
<th>AIC</th>
<th>( \Delta \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td>Ability beliefs, Integrity beliefs, Trust Intentions, Intention to Voice, Forgiveness</td>
<td>134.51***</td>
<td>68</td>
<td>0.96</td>
<td>0.06</td>
<td>12946.65</td>
</tr>
<tr>
<td>Model 2</td>
<td>Trust beliefs, Trust Intentions, Intention to Voice, Forgiveness</td>
<td>160.21***</td>
<td>72</td>
<td>0.95</td>
<td>0.06</td>
<td>12979.48</td>
</tr>
<tr>
<td>Model 3</td>
<td>Trust beliefs, Trust Intentions, Forgiveness</td>
<td>266.11***</td>
<td>75</td>
<td>0.88</td>
<td>0.09</td>
<td>13105.74</td>
</tr>
<tr>
<td>Model 4</td>
<td>Trust, Forgiveness</td>
<td>1393.84***</td>
<td>77</td>
<td>0.20</td>
<td>0.23</td>
<td>14947.02</td>
</tr>
<tr>
<td>Model 5</td>
<td>Single factor</td>
<td>1514.29</td>
<td>78</td>
<td>0.13</td>
<td>0.24</td>
<td>15275.59</td>
</tr>
</tbody>
</table>

Note. CFI=Comparative Fit Index; RMSEA = Root Square Error of Approximation; AIC = Akaike Information Criterion; \( \Delta \chi^2 \) when compared to Model 1. * \( p < 0.05 \) ** \( p < 0.01 \) *** \( p < 0.001 \)

H2 was partially supported as the results show that a high-risk violation results in significantly lower integrity beliefs \((b = -0.34, SE = 0.20, t = -1.76, p < 0.05)\) and forgiveness \((b = 0.45, SE = 0.19, t = -2.43, p < 0.05)\), than a low-risk violation. However, no significant differences emerged for ability beliefs, trust intentions or intention to voice (See Table 5.5 for mean values). Furthermore, consistent with H3a, and the results of Study 1 (Chapter 4), non-substantive response had a main effect on trust such that an apology resulted in higher ability beliefs \((b = 0.71, SE = 0.19, t = 3.63, p < 0.01)\), integrity beliefs \((b = 0.68, SE = 0.20, t = 3.45, p < 0.001)\), trust intentions \((b = 0.37, SE = 0.18, t = 2.03, p < 0.05)\), and forgiveness \((b
Table 5.3.

Means, standard deviations and correlations between study variables

<table>
<thead>
<tr>
<th>Measure</th>
<th>Alpha α</th>
<th>Mean</th>
<th>SD</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>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ability trust beliefs</td>
<td>.88</td>
<td>3.59</td>
<td>1.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Integrity trust beliefs</td>
<td>.83</td>
<td>3.34</td>
<td>1.06</td>
<td>.76**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Trust Intentions</td>
<td>.82</td>
<td>3.06</td>
<td>1.00</td>
<td>.72**</td>
<td>.72**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Intentions to Voice</td>
<td>.84</td>
<td>4.47</td>
<td>.78</td>
<td>.25**</td>
<td>.12*</td>
<td>.14*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Forgiveness</td>
<td>--</td>
<td>4.05</td>
<td>1.03</td>
<td>.46**</td>
<td>.46**</td>
<td>.47**</td>
<td>.14*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Trust Propensity</td>
<td>.80</td>
<td>4.45</td>
<td>.68</td>
<td>.04</td>
<td>.03</td>
<td>.06</td>
<td>.18**</td>
<td>- .05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Trait Trust</td>
<td>--</td>
<td>5.01</td>
<td>.93</td>
<td>.18**</td>
<td>.14*</td>
<td>.06</td>
<td>.25**</td>
<td>.13*</td>
<td>.33**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Identification</td>
<td>.66</td>
<td>3.95</td>
<td>.75</td>
<td>-.02</td>
<td>.05</td>
<td>.01</td>
<td>.11*</td>
<td>.24**</td>
<td>.07</td>
<td>.21**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 General Voice Behaviour</td>
<td>.83</td>
<td>4.52</td>
<td>.82</td>
<td>-.11*</td>
<td>-.08</td>
<td>-.13*</td>
<td>.52**</td>
<td>.03</td>
<td>.11</td>
<td>.24**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Experience on ward</td>
<td>--</td>
<td>1.75</td>
<td>1.12</td>
<td>-.02</td>
<td>.07</td>
<td>.11</td>
<td>.01</td>
<td>-.01</td>
<td>-.23**</td>
<td>-.28**</td>
<td>-.09</td>
<td>-.07</td>
</tr>
</tbody>
</table>

Note. N = 145; * p < 0.05, ** p < 0.01, *** p < 0.001
= 0.28, SE = 0.12, t = 2.26, p < 0.01) than a justification (see Table 5.4 for mean values). No significant main effect was found for substantive responses (H3b): a voluntary procedure was no more effective than an involuntary procedure. Further analyses to establish if substantive responses per se were more effective than no response revealed a significant main effect on integrity beliefs (b = 0.58, SE = 0.29, t = 2.00, p < 0.05), such that a substantive response (irrespective of who initiated it) resulted in higher integrity beliefs than no response.

These main effects were qualified by a significant Non-substantive response x Substantive response x Risk interaction effect on ability beliefs (b = -1.06, SE = 0.53, t = -2.00, p < 0.05) and trust intentions (b = -0.88, SE = 0.49, t = -1.79, p < 0.05). Consistent with H4, the results show that an apology following a low-risk integrity violation by a supervisor results in stronger ability beliefs than an apology combined with a procedure (see Figure 5.1). An apology alone also results in stronger intentions to trust the supervisor than an apology combined with an involuntary procedure, but not an apology combined with a voluntary procedure (see Figure 5.2). A voluntary substantive response enhances the effect of an apology on employees’ trust intentions. Following a similar pattern to the study detailed in Chapter 4, the results show that following a high-risk integrity violation, a combination of apology and an involuntary substantive response, as opposed to a voluntary substantive response, results in greater ability beliefs (b = -1.06, SE = 0.53, t = -2.00, p < 0.05) and intentions to trust (b = -0.88, SE = 0.49, t = -1.79, p < 0.05) than an apology alone (See Figures 5.3 and 5.4). No such effects were found for integrity beliefs, intentions to voice or forgiveness.

In addition to substantive and non-substantive responses, the results show that reported ability beliefs were lower when participants had more general
identification with senior nurses \( (b = -0.17, SE = 0.10, t = -1.65, p < 0.05) \), and higher with an increase in trait trust \( (b = 0.25, SE = 0.09, t = 2.81 \ p < 0.001) \). Integrity beliefs were positively influenced by trait trust \( (b = 0.22, SE = 0.08, t = 2.68, p < 0.01) \), and experience on a ward \( (b = 0.18, SE = 0.07, t = 2.62, p < 0.01) \); the latter of which also had a positive impact on trust intentions \( (b = 0.15, SE = 0.07, t = 2.11, p < 0.01) \). Reported levels of forgiveness was higher among those with more trait trust \( (b = 0.21, SE = 0.10, t = 2.20, p < 0.01) \), experience on a ward \( (b = 0.14, SE = 0.08, t = 1.76, p < 0.01) \), and trust propensity, \( (b = 0.29, SE = 0.11, t = 1.89, p < 0.05) \). Finally, intention to voice was higher among those with more trait trust \( (b = 0.09, SE = 0.06, t = 1.46, p < 0.05) \) and a general willingness to engage in voice behaviour \( (b = 0.43, SE = 0.07, t = 6.36, p < 0.001) \).

**Exploratory analysis**

Finally, an exploratory question concerned whether the predicted effects were robust across event types; namely when the violation is isolated to the senior nurse’s actions and when the violation implicates the student nurse. The results show that the event implicating the student nurse resulted in lower levels of forgiveness \( (b = 0.79, SE = 0.43, t = 1.86, p < 0.05) \) and intention to voice \( (b = 0.57, SE = 0.28, t = 2.07, p < 0.05) \) when the risk was high but not when the risk was low. A significant Event x Substantive response interaction also emerged for integrity beliefs \( (b = 0.55, SE = 0.30, t = 1.86, p < 0.05) \). The results show that when the student nurse is implicated, a voluntary substantive response results in higher integrity beliefs than an involuntary substantive response. However, when the event is isolated to the senior nurse’s actions, a substantive response (voluntary or involuntary) leads to greater integrity beliefs than when no action is taken (See Figure 5.5). Similar results emerge for intention to voice. When the event is isolated to the senior nurse’s
actions, there is no significant difference between a voluntary response, an involuntary response or no action on participants’ intentions to voice. However, when a student nurse is implicated, a voluntary response results in greater intention to voice than an involuntary response or no action (Figure 5.6) \( (b = -0.43, SE = 0.19, t = 2.26, p < 0.05) \). The results showed no effects of event type on non-substantive responses alone, or when combined with substantive interactions, suggesting that these high-order effects hold constant across event types.
Table 5.5

Means and standard errors on trust outcome measures in relation to the level of risk implicated

<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Risk</th>
<th>Mean</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability Beliefs</td>
<td>Low</td>
<td>3.62</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.54</td>
<td>0.09</td>
</tr>
<tr>
<td>Integrity Beliefs</td>
<td>Low</td>
<td>3.45</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.17</td>
<td>0.09</td>
</tr>
<tr>
<td>Trust Intentions</td>
<td>Low</td>
<td>2.99</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.09</td>
<td>0.09</td>
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<tr>
<td>Forgiveness</td>
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<td>4.15</td>
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<tr>
<td></td>
<td>High</td>
<td>3.81</td>
<td>0.09</td>
</tr>
<tr>
<td>Intentions to voice</td>
<td>Low</td>
<td>4.53</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.44</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Figure 5.1: Three-way Interaction between Non-substantive response * Substantive response * Risk on Ability Beliefs
Figure 5.2: Three-way Interaction between Non-substantive response * Substantive Response * Risk on Trust Intentions

Figure 5.3: Three-way Interaction between Non-substantive Response * Substantive Response * Risk on Ability Beliefs
Figure 5.4: Three-way Interaction between Non-substantive Response * Substantive Response * Risk on Trust Intentions

Figure 5.5: Two-way Interaction between Substantive Response * Event Type on Integrity Beliefs.
The aim of this study was to replicate the findings from the gas industry in a different sector, namely healthcare, and to identify how personal involvement in an event impacts upon the effectiveness of a non-substantive and substantive response in the repair of employee trust in management. Consistent with the findings reported in Chapter 4, and much of the trust repair literature (De Cremer & Schouton, 2008; Kim, Dirks, Cooper & Ferrin, 2004; Tomlinson, Dineen, & Lewicki, 2004), the results support the importance of an apology over a justification in the repair of trust beliefs, trust intentions and forgiveness (H3a). The results showed no main effect for a substantive response (H3b), such that one self-imposed was no more effective than one imposed by the hospital. However, the results did show that the origin of
these responses become more important when considered along with the nature of the event in terms of risk.

Following a low-risk violation, for example, no differences emerged between a voluntary and involuntary response in their effect on the repair of ability beliefs. In this case, an apology alone was most effective. However, following a high-risk violation, substantive responses enhanced trust repair. Specifically, the combination of an apology and an involuntary substantive response was more effective than an apology alone. In addition to these between risk-level effects, the results also showed variation within a single level of risk depending on the dimension of trust considered. For trust intentions, when the risk was low, an apology alone or an apology and a voluntary substantive was most effective. An involuntary response weakened the effects of an apology to repair employees trust intentions. However, when the risk is high, an apology combined with an involuntary response was most effective in repairing employees reported trust intentions. These results suggest a number of things.

First, that non-substantive responses can effectively repair trust following low-risk violations. This is consistent with the conceptual model of trust repair provided by Janowicz-Panjaitan and Krishnan (2009), which proposes that less severe violations can be repaired with non-substantive responses that show internal attribution for the event, such as an apology. On the other hand, when an apology is implemented with a substantive response, particularly one emanated from the hospital, it may be perceived as an extreme response to a low-risk event and suggest the hospital is privy to something the employees are not. This may to lead to reduced perceptions of trustworthiness. Second, severe violations require more substantive measures such as the implementation of rules, policies and procedures. This is
because following severe violations individuals employ increasingly demanding criteria to assess the sincerity of an apology. As a result, the greater the severity of the violation, the more difficult it is to perceive an apology as sincere (Davila, 2004). However, providing a combination of a substantive and non-substantive response has been found to encourage co-operative behaviour (Bottom, Gibson, Daniels, & Murnighan, 2002), which can promote trust.

This study showed the framing of the substantive response to vary as a function of personal involvement. The results showed that a voluntary response is more effective than an involuntary response when a student nurse is implicated in the violation. Voluntary responses lead to greater beliefs regarding the senior nurse’s integrity than involuntary responses. Although, no differences were found in trust intentions, intention to voice was also greater following the introduction of a voluntary procedure. In cases when a person is implicated in the event through management actions, a voluntary response may prove more effective than an involuntary response as Jones and Davis (1965) found that individuals look at the degree to which they are adversely affected by an event when qualifying their attributions of offenders. In a non-implicated event, a student nurse is not affected, it is primarily the patient. However, they become more adversely affected by the event when they are implicated in it. In such cases, although an involuntary response can prevent a future violation, individuals may also want the senior nurse to demonstrate remorse and a greater commitment to ensuring a similar violation will not happen again. This can be signalled with a voluntary response (Dirks, Kim, Ferrin, & Cooper, 2011).

In agreement with the previous study, the results reported here showed the importance of individual difference factors in trust repair. The results showed that
trust and forgiveness were respectively higher among those with high trait trust and trust propensity, and among those with more experience of working on a ward (Gilbert & Li-Ping-Tang, 1998; Rhoades & Eisenberger, 2001). Interestingly, ability beliefs were lower among those who identified with senior nurses. This may be explained by self categorisation effects (Turner, 1985), such that participants may have perceived themselves as similar to a senior nurse in terms of their shared goals and values. However, following an act of negligence, perceptions of similarity would reduce, leading participants to respond less favourably toward them.

Limitations & Future Directions

This study (and the one reported in Chapter 4) showed the effects of a preventive procedure on employees’ trust repair in management. It identified these effects to be important in high-risk situations. However, the sample was carried out on undergraduate students. In an attempt to address this problem the participants included in the study had on average 1.75 years experience of working on a hospital ward. This ensured that the participants were knowledgeable of common practices and occurrences within a hospital, enabling them to identify more with the vignettes and increase ecological validity.

While the study was insightful, to build upon these findings it would be useful to know whether making the outcome of the senior nurse’s actions explicit, impacts upon the effectiveness of the response strategies. One potential outcome of a medical error may be an allergic reaction to an incorrect administration of medication. Indeed, in the non-implicated vignette, no significant differences in severity was reported between low-risk and high-risk conditions which suggests participants may not have recognised the different consequences of these events. It would also be useful to establish how the substantive response of a procedure
compares to other possible responses that fall into this category. For example, research identifies actions, such as monitoring (Bottom et al., 2002; Dirks et al., 2011) to be effective in some situations. A more complete understanding of the role of substantive responses, might therefore consider these other actions.

Conclusion

This study demonstrated the robustness of the findings of Chapter 4 and indicated that they can be generalised across different risk contexts. Furthermore, it is one of the first studies to empirically test the importance of substantive responses in the repair of integrity-based violations under different conditions of personal involvement in the event. The results show that apologies are effective at repairing trust following low-risk acts of negligence. Second, they suggest that when the outcome of the act is severe, the effectiveness of an apology may be enhanced with the implementation of a preventative procedure. It is important that these procedures are perceived as emanating from a request from the person who engaged in the act of negligence when the act implicates another member of staff. In these cases, a procedure initiated by the organization will be less effective.
CHAPTER SIX

The Relative Importance of Non-Substantive and Substantive Responses in the Repair of Employees’ Trust

The previous two studies examined the effects of a preventive procedure in the repair of employees’ trust in management following an integrity-based violation. Although important, a preventive response is only one of the many actions that may be taken to repair trust in a target. The current study, reported in this Chapter, explores this issue by examining the effects of a preventive procedure alongside other substantive (and non-substantive) actions in repair of actual trust violations. Using data from 161 UK gas employees, the study examines the frequency that management engage in trust violations (i.e., ‘wrong-doing’), the responses that typically follow, and their relationship to employee trust. The results of this study are presented, followed by a discussion of their implications for the trust repair literature.

6.1 Method

6.1.1. Participants & procedure

Participants were 161 employees recruited from a single UK gas company, as detailed in Chapter 4. The sample comprised 116 males (72%) and 19 females (11.8%) (26 participants did not disclose their gender), which is broadly representative of the gas industry (Ross, 2008). The sample included the occupations of technicians (production, mechanical, maintenance, electrical; 26.09%), engineers (project, machinery, integrity and shift; 15.53%) and miscellaneous roles (inspectors, accountants, administrators, chemists, platers, scaffold workers, safety officers; 31.06%). The sample comprised 11 (4.6%) members of management (4 managers
and 7 supervisors) and 104 (64.6%) frontline employees. On average participants had been working in the industry for 18.03 years ($SD = 10.75$), working under their current supervisor for 5.76 years ($SD = 6.15$), and working under their current manager for 5.63 years ($SD = 6.10$). The majority of participants were employed directly by the company (55.2%), with a small percentage being sub-contractors (20.7%) (21% did not disclosure their employer).

Participants were approached at their worksite and asked to participate in a questionnaire survey looking at factors impacting upon safety. Those that were interested in taking part in the study were surveyed in groups of up to 15, on site and during working hours. Immediately prior to the survey, participants were again given information about the study by the researcher and reminded of their right to withdraw at any time. No member of management was present in the room while the survey was being conducted.

6.1.2. Measures

Participants were required to complete a questionnaire that collected information on how often their immediate supervisor engaged in ‘wrong-doing’ over the last 6 months; the response that followed; and their self-reported levels of trust in the supervisor. Supervisors were chosen as the level of management to focus on as participants interacted frequently with supervisors which increased the likelihood of them experiencing a ‘wrong-doing’. The time scale of 6 months was also chosen to avoid problems with retrospective memory (i.e., people forgetting, recalling events inaccurately), and to provide a long enough time frame for an event to have actually occurred.

Response strategies. Thirteen response strategies were examined, which were taken from interviews with 23 employees (20 males, 3 females) recruited from the
UK gas industry, and a review of the literature (Bottom, Gibson, Daniels & Murnighan, 2002; Dirks, Kim, Ferrin & Cooper, 2011; Kim, Dirks, Cooper & Ferrin, 2004; Sitkin & Bies, 1993; Tedeschi & Norman, 1985). The interviewed sample represented engineers, technicians, and administrative positions. Three of the participants were members of management (1 manager and 2 supervisors) and 20 participants were frontline employees. All participants were recruited through self-selection, following the distribution of a memo (by the organization’s safety officer) calling for participants to take part in a study on working relationships and attitudes towards safety. Participants were interviewed individually on site and in a private room. Each interview lasted between 45-60 minutes and was digitally recorded following permission from participants. All participants were given the opportunity to view the transcript of their interview, which was requested by two participants.\footnote{One participant withdrew their data following transcription.}

Each interview broadly focused on three topics: safety behaviours and compliance, actions or events that might lead to a reduction of employee trust in others, and response strategies that might be taken by the person violating trust, or the organization, to ‘repair’ or improve the situation. The topic of safety was explored for the purpose of the company’s interests. In relation to the other two topics, where participants were not able to think of a situation that would lead to a reduction in trust (real or imagined), they were provided with an example of an event that was known to reduce trust. Providing this example enabled participants to respond to the second main question regarding responses to the event that would likely improve the situation.

A thematic analysis of the interview data (as detailed in Chapter 3) identified a number of themes. First, that integrity-based violations (e.g., skipping safety
procedures to ensure jobs were completed quickly) were more commonly linked to a reduction of trust in management. Management were more likely to skip procedures in order to ensure jobs were completed on time which would help secure their bonus. Second, that competence-based violations (e.g., acts relating to a lack of skill or knowledge) were more likely to lead to a reduction of trust in workmates. Workmates were described as less experienced than managers which led to increased likelihood of them making mistakes. Third, that the typical response to such events was to justify their actions, which was different to the response that participants believed should be taken (e.g., apology, training (personally initiated and imposed), disciplinary action), and that were necessary when the event has severe consequences (e.g., procedure implemented). Interestingly, most participants emphasised the importance of substantive responses.

Six main response strategies emerged during the interviews that related to an apology, justification, training (personally requested and imposed by the organization), disciplinary action and a preventative procedure. These were used in the current study together with seven response strategies taken from the literature, which related to monitoring (personally requested and imposed by the organization), personal promise it will not happen again, asking what is required for forgiveness, denial, blaming someone else and providing an excuse for the event. Table 6.1 shows a categorisation of the strategies used in this study according to whether they are non-substantive or substantive, internally attributed/initiated (i.e., accepts responsibility for the event) or externally attributed/initiated (i.e., denies responsibility).

Employees in the current study were required to state how likely, on a scale of ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7), one of the thirteen
response strategies would occur following a ‘wrong-doing.’ The term ‘wrong-doing’ was used to avoid the question being too prescriptive and as such focusing on one event type while excluding others which may signify the same type of trust violation (e.g., integrity-based). Participants also stated the frequency that their immediate supervisor engaged in a wrong-doing in the last 6 months. Participants responded to this question on a 5-point scale ranging from ‘Never’ (1) to ‘Always’ (5).

**Outcome Measures**

*Trust beliefs.* Employees’ trust beliefs in their immediate supervisor were measured using six items taken from Mayer and Davis (1999; see Chapters 4 & 5). Three items measured employees’ ability beliefs ($\alpha = .94$) and three items measured employees’ integrity beliefs ($\alpha = .92$). Responses were made on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7).

*Trust intentions.* Employees’ trust intentions towards their immediate supervisor were measured using three items taken from Mayer and Davis’s (1999) trust intentions scale (see Chapters 4 & 5). Responses were made on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7) ($\alpha = .92$).

**Control Measures**

Years in industry, years reporting to the current supervisor, trust propensity (as measured in Chapter 4 and 5), employer (contractor or operator), and the location from which the data were collected were included in the analysis as control measures. With the exception of employer and location, these factors have been shown to impact employees’ trust attitudes across different studies (Buchan, Croson & Solnick, 2008; Kalleberg & Rognes, 2000; Mishra & Morrissey, 1990). Employer
Table 6.1. 
*Thirteen response strategies grouped by response type and source of implementation*

<table>
<thead>
<tr>
<th>Response type</th>
<th>Specific action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Substantive</td>
<td></td>
</tr>
<tr>
<td>Accepts Responsibility</td>
<td>Apology, Promise it will not happen again</td>
</tr>
<tr>
<td>Does not accept responsibility</td>
<td>Denial, Blame, Excuse, Justification</td>
</tr>
<tr>
<td>Substantive</td>
<td></td>
</tr>
<tr>
<td>Self-initiated by sup/man</td>
<td>Training, Monitoring, Asking what actions are required for forgiveness</td>
</tr>
<tr>
<td>Implemented by the company</td>
<td>Disciplinary action, Monitoring, Training</td>
</tr>
<tr>
<td>Not explicitly stated who implemented response</td>
<td>A preventative procedure is put in place</td>
</tr>
</tbody>
</table>

and location were included to control for any site-specific, or employer-specific, factors that may impact employee trust beliefs.

6.2. Results

6.2.1. Preliminary analysis

Of the 161 participants surveyed across the three locations, 76 participants reported that their immediate supervisor had ‘never’ engaged in a wrong-doing over the last 6 months. Data from these participants were removed from the main analysis to control for the fact that these responses would be based on pre-existing levels of trust (e.g., *I trust my immediate supervisor therefore I would expect him to apologize following a wrong-doing, thus responding ‘strongly agree’ to the apology option*), rather than actual experiences following a wrong-doing. While it cannot be guaranteed that the participants included in the main analysis are not also drawing, in part, on inference informed by existing long-term beliefs, the likelihood of this being
the case is lower than in the ‘never’ group as they have experience of an actual event. In addition to these 76 participants, a further 7 were removed from the analysis due to large amounts of missing data (> 50% in 6 cases) or because data screening indicated them to be an outlier \((n = 1)\). This resulted in a final sample size of 78 participants for the main analysis.

*Levels of ‘wrong-doing’*

Forty-nine employees (63.3%) reported that their immediate supervisor ‘very rarely’ engaged in wrong-doing over the last six months. Eight employees (10.1%) reported their supervisor ‘sometimes’ engaged in wrong-doing, and 4 employees (5.1%) reported their supervisor ‘often’ engaged in wrong-doing (17 employees [21.5%] failed to provide this information). Participants who did not declare how often their immediate supervisor engaged in wrongdoing were included in the main analysis for two reasons. First, they did not explicitly state no wrong-doing, hence there was a possibility of this. Second, including these participants increased the power of the analysis.

6.2.2. *Validity testing*

Prior to the main analysis, Confirmatory Factor Analyses (CFA) were carried out to test the construct and discriminant validity of the outcome measures of trust. The results show that a three-factor model in which ability beliefs, integrity beliefs and trust intentions were regarded as separate constructs provided a moderate fit to the data (Table 6.2). All items significantly loaded onto each factor with an average range of, \(r = .76 - .94\). The results further show that the three-factor model provides a better fit to the data than a 2-factor model in which belief measures are combined (model 2), or a single-factor model in which all measures of trust are combined (model 3). These results support the construct and discriminate validity of the
outcome measures and suggest three distinct constructs of ability beliefs, integrity beliefs and trust intentions.

6.2.3. Main analysis

Table 6.3 shows the means, standard deviations and correlations between study variables. Of the different control measures, years in industry and trust propensity are positively related to employee trust beliefs and intentions in their immediate supervisor. Of the different response strategies, trust beliefs and intentions respectively have the strongest negative correlation with blaming another for the event and providing an excuse. Their strongest positive correlation is with an apology (ability beliefs) and re-training (integrity beliefs and intentions). A strategy unrelated to employees’ trust in their immediate supervisor following a wrong-doing is a supervisor asking for remorse (i.e., what it would take for forgiveness).

In order to examine the relative importance of a preventative procedure compared to other non-substantive and substantive responses in repairing employees’ trust in their immediate supervisor following a wrong-doing, hierarchical regression analyses were carried out. The three measures of trust (ability beliefs, integrity beliefs and trust intentions) were tested in three separate models as the criterion variable. Response strategies that had a significant correlation with employee trust in their immediate supervisor were included in the model as predictor variables. Also included in the models were the control measures (e.g., trust propensity) that were significantly related to the trust outcome measure (see Table 6.3). This resulted in no more than twelve predictor variables in each model. Based on this number, a sample size of 78 participants is considered acceptable for ensuring suitable power (Wampold & Freund, 1987). The data showed no evidence of multicollinearity between the predictor variables, with VIF co-efficients all under 5.
Table 6.2.

*CFA results for trust beliefs and intentions*

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>CFI</th>
<th>RMSEA</th>
<th>AIC</th>
<th>$\Delta \chi^2$</th>
</tr>
</thead>
<tbody>
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<td>Model 1. Ability Beliefs, Integrity Beliefs, Trust Intentions</td>
<td>85.58***</td>
<td>32</td>
<td>.96</td>
<td>.10</td>
<td>151.58</td>
<td>--</td>
</tr>
<tr>
<td>Model 2. Trust Beliefs, Trust Intentions</td>
<td>137.39***</td>
<td>34</td>
<td>.93</td>
<td>.14</td>
<td>199.39</td>
<td>51.81***</td>
</tr>
<tr>
<td>Model 3. Trust</td>
<td>322.31***</td>
<td>35</td>
<td>.80</td>
<td>.23</td>
<td>382.31</td>
<td>236.73***</td>
</tr>
</tbody>
</table>

Note: CFI = Comparative Fit Index; RMSEA = Root Square Error of Approximation; AIC = Akaike Information Criterion; $\Delta \chi^2$ when compared to Model 1.

*** $p < 0.001$

(Menard, 1995). There was no discernable pattern amongst residuals when plotted using scatterplots, indicating residuals were random.

The analysis took the form that control variables were entered at Step 1, substantive response strategies were entered at Step 2, and non-substantive response strategies were entered at Step 3. The variables were entered in this order to establish the relative importance of a preventative procedure against other substantive responses, and whether non-substantive responses had anything further to contribute in understanding trust repair. The results in Table 6.4, Step 2, show that when substantive responses are considered alone, and consistent with Chapters 4 and 5, a procedure is positively related to employees’ trust beliefs (ability and integrity). Training also emerges as a significant predictor of employees’ beliefs and intention to trust supervisors. However, the effects of training are lost when non-substantive responses are added to the model (Step 3). The results show that when both response types are considered, employees’ ability beliefs and trust intentions are positively
Table 6.3  
Means, standard deviation and correlations among study variables

<p>| Variable               | M    | SD   | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Location               | 1.96 | .80  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Employer               | 1.28 | .45  | .05  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Yrs in Industry        | 17.68| 11.03| .22  | -.21 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Yrs with supervisor    | 5.76 | 6.15 | .24  | .00  | .51  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Trust propensity       | 4.55 | .77  | -.07 | -.02 | .05  | -0.07|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Apology                | 4.77 | 1.08 | -.04 | .19  | -.21 | -.09 | .20  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Promise                | 4.44 | .96  | -.13 | -.12 | .02  | -.10 | .18  | .31  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Ask forgiveness        | 3.10 | 1.14 | .05  | .02  | -.03 | -.08 | .09  | .42  | .33  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Blame                  | 3.03 | 1.26 | .11  | .23  | -.02 | -.03 | -.27 | -.46 | -.19 | -.20 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Denial                 | 3.00 | 1.07 | .17  | .11  | .05  | -.07 | -.39 | -.56 | -.13 | -.19 | .80  |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Excuse                 | 3.74 | 1.35 | .23  | .07  | .11  | .23  | -.27 | -.41 | -.14 | -.16 | .74  | .70  |      |      |      |      |      |      |      |      |      |      |      |      |
| Justification          | 3.77 | 1.12 | .24  | .22  | .10  | .16  | -.19 | -.22 | -.01 | -.02 | .63  | .56  | .70  |      |      |      |      |      |      |      |      |      |      |      |
| Disciplined            | 4.19 | 1.14 | -.01 | .01  | .15  | .10  | .05  | .35  | .29  | .50  | -.37 | -.23 | -.25 | -.29 |      |      |      |      |      |      |      |      |      |      |
| Monitored (Vo)         | 3.55 | .95  | -.02 | .07  | -.02 | .01  | .06  | .42  | .23  | .68  | -.30 | -.24 | -.22 | -.01 | .55  |      |      |      |      |      |      |      |      |      | 116 |</p>
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<th>Re-training (IV)</th>
<th>Procedure</th>
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Note: N = 78, * p < 0.05, ** p < 0.01; Employer = Main company (1) and (2) contractor.
predicted by an apology and negatively predicted by monitoring (Adjusted $R^2_{ability} = .55$; Adjusted $R^2_{intentions} = .57$). Further, integrity beliefs are positively predicted by discipline and negatively predicted by blaming someone else for the event (Adjusted $R^2 = .62$).

Of particular interest is the negative regression weight that emerges for monitoring, which contrasts with its positive zero-order correlation with trust measures (Table 6.3). At a substantive level, this finding might suggest that employees’ interpretation of the meaning of monitoring varies as a function of the response to which it is combined. For example, when monitoring is presented alone, it may be regarded as a sufficient response that allows trust to rebuild. However, when it is combined with non-substantive responses, in particular an apology, it may be interpreted as an indication that the supervisor is not trusted by the company (despite an apology being given); hence serving to reduce employees’ trust further.

A second, and equally plausible explanation is that the result reflects a statistical artefact caused through effects such as suppression. A suppressor variable is a predictor that has zero correlation with the criterion variable but is correlated to one or more predictor variables. This can suppresses variance in other predictor variables to impact upon the overall effect of the predictor(s) on the criterion (Lancaster, 1999). To explore this in more detail, a second set of analyses was carried out in which only the response strategies that were positively related to trust outcome measures were included in the model. This reduced suppressor effects that may have occurred as a result of the inclusion of negatively correlated responses within the models tested. It also allowed an examination of the relative importance of different strategies that are known to improve trust (i.e., to have a positive effect).
The results in Tables 6.5 show that employees’ ability beliefs are positively predicted by a procedure and apology, and negatively predicted by monitoring (Adjusted $R^2 = .48$), and their trust intentions are positively predicted by a procedure and apology (Adjusted $R^2 = .46$). Integrity beliefs are positively predicted by discipline, a procedure and an apology (Adjusted $R^2 = .42$). In contrast to the findings of the first analyses, the results show when both non-substantive and substantive responses are considered in the same model, being monitored involuntary (i.e., monitoring imposed by the company) is no longer significantly related to trust intentions.
Table 6.4

Results of hierarchical regression analysis - positive and negative correlations

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Table 6.5.

Results of hierarchical regression analysis - positive correlations only

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6.3. Discussion

This study described in this Chapter set out to explore the relative importance of a preventive procedure when compared to other responses in the repair of employee trust in their supervisor following a real trust violation. The results of two analyses showed a significant role for a procedure in employees’ trust, but suggested that this effect was specific to situations in which all response strategies were positive. For example, across both analyses, a procedure emerged as a significant predictor of trust beliefs and intentions in the absence of non-substantive responses that attribute responsibility for the event to external sources. When a supervisor seeks to blame others for the event, provides an excuse or justifies their actions (which may be regarded as negative responses), only substantive responses such as discipline and monitoring emerge as significantly related to employees’ trust. This pattern of results suggests that the effectiveness of a procedure, or employees’ interpretation of its implications for their supervisors’ trustworthiness, is shaped by the context in which it is implemented. More specifically, when a procedure is implemented with a negative non-substantive response (e.g., blaming someone else for the event), a procedure may be ineffective as the supervisor has failed to take responsibility for their actions therefore it may be perceived that they will violate the new procedure and subsequently attribute responsibility to somebody else. Indirect support of this comes from the finding that a procedure was significantly related to employees’ trust when considered together with an apology.

The results showed that discipline was effective in repairing employees’ beliefs regarding their supervisor’s integrity. The effectiveness of disciplinary action may be attributed to its element of punishment, which acts as a deterrent for repeat
violations (Dirks, Kim, Cooper & Ferrin, 2005; Sitkin & Roth, 1993). Disciplinary action holds the person who committed the violation accountable for their actions and provides them with the opportunity to reform and rehabilitate their behaviour or face further action (Ball, Trevino & Sims, 1993). It also acts as a sanction, reducing opportunities for future violations to occur and helps to ensure the source acts with integrity (Das & Teng, 1998). The fact that discipline was related to employees’ integrity beliefs but not their ability beliefs or trust intentions suggests two things. First, that the effectiveness of discipline may be limited to acts of immoral behaviour (i.e., integrity-based violations). Following acts of incompetence, discipline may not be perceived as warranted if employees attribute incompetence to the organization and its failure to train the supervisor appropriately. Second, that employees’ willingness to rely on their supervisor requires something different than disciplinary action that would suggest the supervisor is remorseful or unable to carry out the act again, such an apology or a procedure, both of which were shown to be effective in the repair of trust intentions.

Interestingly, the study showed mixed findings for monitoring. When considered in isolation, monitoring had a positive effect on employees’ trust in their immediate supervisor. However, when this was considered together with other responses, its effects became negative. This suggests two things. First, that monitoring may turn negative when combined with a more positive response, such as an apology, in that it may be seen to be over compensating for an untrustworthy supervisor. Second, the findings may suggest the presence of a statistical artefact, such as a suppressor, which results in a negative effect of monitoring on trust. For example, Schweitzer and Ho (2005) suggested that paradoxically, monitoring can both increase and decrease trusting behaviour. This effect was largely dependent
upon how an individual interprets an event. Those who attributed trustworthy actions to the monitoring scheme as opposed to an individual had reduced perceptions of the individual’s trustworthiness. In relation to the current study, participants may have attributed trustworthy behaviour to the supervisor when monitoring was implemented by itself. However, when monitoring was implemented with an apology it may have led employees to believe that the company does not believe or accept the validity of the supervisor’s apology. As a result of this, any trustworthy behaviour displayed by the supervisor may be attributed to the actions of the company who implemented the response. Moreover, monitoring may only be effective when it is regarded as a fair response. For example, Karremans and Van Lange (2005) found that it is only when perceptions of fairness are perceived, individuals can let go of negative emotions caused by a violation, which is positively correlated to repaired relations. Employees may have perceived monitoring as fair when introduced alone. However, it may have been considered an unfair response to implement, even after an apology is given. This may reduce perceptions of the trustworthiness of the supervisor if employees question why the company felt the need to introduce monitoring following an apology.

Consistent with previous research, and results in Chapters 4 and 5, an apology emerged as a positive influence on employees’ ability beliefs and trust intentions (Bottom et al., 2002; Gill, Thompson, Febbraro, & Barnes, 2010; Kim et al., 2004, Tomlinson, Dineen, & Lewicki, 2004). This effect emerged irrespective of whether other response strategies were positive or negative, thus showing the strength of this response in shaping trust beliefs. According to researchers (Ferrin, Kim, Cooper & Dirks, 2007; Lewicki & Bunker, 1996; Ohbuchi, Kameda & Agarie, 1989), an apology leads to a positive interpretation of a person’s intention to avoid a
similar act in the future, which effectively repairs trust. This contrasts with non-substantive responses that attribute responsibility for the event externally, which are negatively related to trust. According to Coombs and Holladay (2002), externally attributed responses are ineffective when the person is held accountable for the event as the response is regarded as insincere and thus is not believed. Counter to what is intended, the response leads to a further reduction of trust (Benoit, 1997). The results that emerged in this study support these observations.

Two response strategies that were unrelated to employees’ trust beliefs and intentions were asking for forgiveness and asking to be monitored. According to Stouten and Tripp (2009), asking for forgiveness is effective because it signals an individual’s vulnerability, which helps attenuate negative emotional reactions to repair relations. However, Cole (2008) suggests that asking for forgiveness without offering any other gesture of repentance signals an insincere or less thoughtful response, as the individual has not attempted to try and repair trust by their own accord. Asking to be monitored was unrelated to employees’ ability beliefs and trust intentions. The reason for this finding is unclear but may be related to sample characteristics, such that employees considered this response as unlikely or unrealistic following a ‘wrong-doing’ in the current context.

Limitations & Future Directions

The study provided some important insights in regards to the relative importance of a procedure. However, employees were asked to rate response strategies that typically follow a ‘wrong-doing’ by their immediate supervisor. The reference to ‘wrong-doing’ was used to avoid making the study too narrow in its focus and consequently failing to capture events that signal integrity-based violations. Nevertheless, one obvious consequence of this is that it cannot be argued
exclusively that the responses are specific to integrity-based violations. It is possible, for example, that employees’ recalled events that were competence-based. While this is a real possibility, the findings from a number of interviews with employees from the same industry, as summarised at the start of this Chapter, suggest that the acts recalled are likely to implicate integrity. This would also be consistent with the findings in other studies that show a lack of trust in management figures is linked to demonstrations of low integrity (Conchie & Donald, 2008).

To build upon this study’s findings, it would be useful to know if the results hold constant when the level of risk implicated in the event is controlled for. As shown in Chapters 4 and 5, the effectiveness of a response strategy is moderated by risk such that a response may be more or less effective dependent on whether the event is regarded as more or less severe. Previous research also shows that non-substantive responses are less effective when the outcome of the event has severe consequences for others (Shapiro, Buttner, & Barry 1994). In relation to the current study this suggests that the relative importance of responses identified as effective here, may change or become more prominent following high-risk violations.

Finally as the data is cross-sectional, conclusions regarding ‘causality’ or ‘prediction’ cannot be made. For example, it is possible that participants’ responses were influenced, to some extent, by their long-standing beliefs about their immediate supervisor rather than solely relating to the actual wrong-doing. Steps were taken to mitigate this problem: a time period of six months was used so that participants could accurately recall events where the supervisor had engaged in a wrong-doing; employees that stated that their supervisor ‘never’ engaged in wrong-doing were excluded from the analysis; and a measure of propensity to trust was included to control for any dispositional effects on the results. However, these steps only reduce
the problem rather than eliminate it. Future work might address these issues through longitudinal designs. Unfortunately, it was not possible to employ this approach with the current sample due to the limited access and time constraints imposed by the participating organization.

Conclusion

The current study was one of the first to show how a preventive procedure compared to other substantive (and non-substantive) actions in the repair of employee trust in their immediate supervisor following a wrong-doing. The results support the findings of Chapters 4 and 5 by showing that an apology and a procedure are effective in the repair of employees’ trust beliefs and trust intentions, using examples of real violations. Mitigating any responsibility following a ‘wrong-doing’ will result in a reduction of trust in that target. If a supervisor does attempt to do this, implementing disciplinary action may help to repair beliefs regarding a supervisor’s integrity. Supervisors should avoid asking for future actions to be monitored or for forgiveness as these responses are largely ineffective.
CHAPTER SEVEN

The Effectiveness of Monitoring and Disciplinary Action in the Repair of Employees’ Trust

The findings of the previous study implicated a number of substantive responses as shaping employee trust in their immediate supervisor, following a transgression or ‘wrong-doing.’ Employees’ ability beliefs and trust intentions were related to whether or not a preventative procedure had been implemented and the supervisor’s future actions monitored. Employees’ integrity beliefs were related to whether or not the supervisor had been disciplined. This Chapter aims to build on these findings in two ways. First, it aims to test these relationships in a more controlled way such that ‘causal’ connections between a response and trust can be made. Given that the relationship between a preventative procedure and trust was established in Chapters 4 and 5, the study described here will focus on monitoring and discipline. Second, it aims to unpack these relationships by considering possible mechanisms that may explain how these response strategies impact upon employee trust.

7.1 Introduction

Monitoring and discipline represent two different types of substantive responses, which respectively reflect regulation and punishment (Arvey & Ivanevich, 1980; Dirks, Kim, Ferrin, & Cooper, 2011). Monitoring is implemented to constrain, or regulate, the behaviour of an individual who has acted in a wrongful way. Discipline involves punishing an individual, usually through the removal of some meaningful privilege or benefit (e.g. financial loss, or loss of responsibility or power). Both responses have been shown to be effective in increasing an individual’s trust in the person being targeted (Bottom et al., 2002; Dirks et al., 2011; Gillespie &
Dietz, 2009; Schweitzer & Ho, 2005; Slovic, 1993; cf. findings of Chapter 6). Part of the reason for their effectiveness is attributed to the fact that they modify the individual’s behaviour to what may be considered as more trustworthy actions. For example, monitoring leads individuals to pay greater attention to their behaviour (Goffman, 1959), and hence regulates their actions to comply with procedures and rules, thus deterring responses that are unreliable or untrustworthy (Long & Sitkin, 2006; Salas, Sims, & Burke, 2005; Sitkin & Roth, 1993). Discipline operates in a similar way, by providing individuals with an opportunity to rehabilitate and improve their behaviour following a violation so as to avoid dismissal (Saltzman, 2008).

According to Grote (2001), suspension (a specific act of discipline), is particularly effective for bringing about behavioural change as the individual has time to reflect upon, and gain an insight into, unemployment which acts as a strong ‘wake-up call’ and prompts them to work harder and demonstrate trust-like behaviour. When the company incurs the financial loss of an employee’s suspension (i.e., in terms of paid suspension), it is taken as an indication of their desire to see the individual change and stay with the company. This is likely to increase trustworthy behaviour in the individual and consequently increase others’ trust in them. Indeed, studies have shown that suspension can have a positive effect on employee performance, providing the suspension does not last too long (Trice & Beyer, 1984).

The notion that monitoring and discipline (specifically suspension, which is considered in this study) increases trust in an individual by modifying their behaviour towards trustworthy actions, is a useful first step in understanding how substantive responses operate. This is especially so given that both responses are commonly used within industry following negligent behaviour (Fiddler, 2008;
Greenan, 2012; McWatt, 2011). However, as an explanation, it says little about the underlying psychological processes that underpin these relationships. Understanding these processes is important for gaining an insight into what leads to expected behavioural change, and if response strategies (e.g., monitoring and suspension) achieve this through different routes.

Two processes that may play a role in transforming a substantive response to increased trust are: repentance and perceptions of organizational justice. Repentance is concerned with an individual’s feelings of regret, actively learning from a violation and ensuring a similar event does not re-occur (Dirks et al., 2011). Repentance perceptions have been shown to be an important mechanism through which responses, such as an apology, operate to increase trust (De Cremer & Schouten, 2008; Ohtsubo & Watanbe, 2009; Tomlinson, Dineen & Lewicki, 2004). These studies show, for example, that an apology signals that an individual is repentant for their actions and unlikely to repeat them, which makes others more receptive to trust them again. The role of repentance in relation to monitoring and suspension is under-researched. However, for the reasons cited earlier, it may be possible to argue that monitoring and/or suspension lead to perceptions that a person has learned from their actions and are likely to feel regret. For this reason, repentance might have a direct relationship with these responses, and in turn promote trust in the person.

Given that monitoring and suspension are initiated by the organization, perceptions concerning their fairness are likely to have an important influence on the transgressor’s reaction to these responses. For example, research shows that those who perceive fairness within their organization report greater satisfaction and commitment to work goals (Mossholder, Bennett & Martin, 1998), in part because
they trust the organization’s motives (Aryee, Budhwar & Chen, 2002; Folger & Konovsky, 1989; Konovsky & Pugh, 1994; Pillai, Schriesheim & Williams, 1999). There is also evidence that those who perceive less fairness show less desirable work behaviours, such as sabotage and workplace violence (Mitchell & Daniels, 2003). An action perceived as fair would therefore be likely to generate a more positive response, such that the person would be more receptive to reflecting and learning from their transgression, would show signs of repentance, and thus would engage in more trustworthy behaviour. This pattern may also be expected from those transgressed against and other observers to the situation.

As a construct, organizational justice comprises three dimensions that relate to interactional, procedural and distributive perceptions (Beugre & Baron, 2001; Greenberg, 1995). Interactional justice concerns the perceived fairness of the quality of treatment received when implementing organizational procedures (Bies & Moag, 1986). Procedural justice concerns the perceived fairness of the policies and procedures used in decision-making processes (Lind & Tyler, 1988). Distributive justice concerns the outcomes of any decision-making process, including the perceived fairness of imposed discipline (Cropanzano, Bowen, & Gilliland, 2007). Of the three sub-dimensions, there is evidence to suggest that perceptions of distributive justice and in some situations, procedural justice, are important in the effects of monitoring and suspension on employee trust. It is also possible that these effects occur through repentance.

Within some sectors a ‘Just Culture’ model is used to determine the level and type, of formal response to implement for different transgressions. The aim of these systems is to make transparent to employees how transgressions are managed, which is hoped to lead to perceptions that a just and fair culture exists within the
organization, such that outcomes are proportionate to what the person had done wrong, and outcomes are applied equally to all levels of an organization. In many ways, the aim is to promote perceptions of distributive and procedural justice among employees following a transgression. Monitoring often marks the first step in the application of a ‘just culture’ system, which is used in organizations following events that signal a deviation or breach to procedures (Vogelsmeier, Scott-Cawiezell, Miller & Griffith, 2010). Monitoring is likely to be accepted by employees as a suitable and fair response following a transgression as it helps gather unbiased and accurate information, which is one of the basic components of perceived fairness (Levanthal, 1980). Further support was found during the interviews carried out with practitioner nurses (see Chapter 4), who suggested that monitoring was a just response to implement following a violation due to its corrective and targeted element. Monitoring can ensure that organizational procedures are conformed to and hence can effectively target the problem. Further, the active regulation of a supervisor’s behaviour through monitoring may generate repentance as organizational learning may occur, and consequently highlight to the supervisor the error of their ways so that they can actively commit to ensuring a similar event does not occur in the future.

Discipline, such as suspension, is also considered to be a fair response in some situations. However, research has shown that when discipline is imposed upon an individual it must match the seriousness of the event and be equal to what others have experienced, in order for it to be perceived as fair (Balls, Trevino, & Sims, 1994). Following a severe violation, for example, discipline has a stronger effect on reparation than following a less severe violation (O’Malley & Greenberg, 1983). Suspension is effective in this regard, as it typically marks the final stage of
discipline before dismissal and therefore may be regarded as a fair response (Rowland & Rowland, 1997). Furthermore, in accordance with principles of Equity Theory (Adams, 1965), suspension reduces a supervisor’s outcomes in terms of their perceived credibility and sometimes costs incurred through days spent off work. This can help repair the moral imbalance caused by a violation (Hogan & Emler, 1981) and has implications for employee trust in the supervisor. Discipline in serious situations leads to distributive justice perceptions and may lead employees to expect greater repentance from the supervisor, including greater feelings of regret based on the severe consequences of their actions, and a greater commitment to demonstrate trust-like behaviour to avoid dismissal. This makes employees more receptive to trust them again. Based on this reasoning, it may be predicted that:

Hypothesis 5: The relationship between monitoring and employee trust is sequentially mediated by perceived distributive justice and perceived repentance.

Hypothesis 6: The relationship between suspension and employee trust is sequentially mediated by perceived distributive justice and perceived repentance for high-risk situations only.

In addition to employee trust in the transgressor, monitoring and suspension also has implications for employee trust in the organization, as it is the organization who implements these responses (Folger & Cropanzano, 1998; Loi, Hang-yue & Foley, 2006). Monitoring when communicated in a clear and complete way and managed equitably across employees, is likely to be regarded as fair, and as a clear indication of the standards that are expected from employees. Suspension suggests that the company is taking the event seriously and acting to highlight the
wrongfulness of the supervisor’s actions (Arvey, Davis, Nelson, 1984). According to Workman (2009), this form of procedural justice is essential for reducing employees’ negative attitudes about the fairness of procedures and the policies to which they are exposed. It is also essential for eliciting high levels of trust in the organization (Cohen-Charash & Spector, 2001; Hubbell & Chory-Assad, 2005; Pearce, Bigley & Branyiczki, 1998; Tenbrunsel, Wade-Benzoni, Messick & Bazerman, 2000). This is because employees perceive the systematic decisions made by the organization as an indicator of how they would be treated (Brockner & Siegel, 1996). Further, employees feel equally valued as members of the organization as they believe the same procedures that are applied to management would be applied to all employees (Posthuma, Maertz, & Dworkin, 2007). Lavelle et al. (2009) found that those who perceive procedural justice are more likely to include their organization in their social identity, which is also associated with increased trust (Voci, 2006).

Hypothesis 7: Procedural justice mediates the relationship between substantive responses and employees’ trust in the organization.
7.2 Methods

7.2.1 Participants and procedure

Participants were 164 student nurses recruited from three UK Universities (44 from University A, 62 from University B, and 58 from University C). Eighty-seven per cent of participants were female and 12% were male (1% did not disclose their gender), with an average age of 22.84 years ($SD = 5.02$). Sixty-one percent of students specialised in adult nursing, 36% in child nursing and 2.4% in mental health. Participants had an average of 2.06 years ($SD = 2.28$) experience in working on a hospital ward and the majority of the sample (62.8%) were second year students (62.8%), with a smaller number of third year students (37.2%). A one-way MANOVA showed no significant differences on trust outcomes across the three locations ($ps > 0.05$), or across the three specialities (i.e., adult, mental health, child nursing; $ps > 0.05$). Consequently, all data were combined into a single sample.

Participants were approached during the beginning of a lecture and given a verbal and written summary of the study. They were invited to take part and informed that they would be required to read information about an event concerning a senior nurse, and then respond to questions about this nurse. Those who voluntarily
consented completed the questionnaire at the beginning of the lecture, while those
who declined were given the opportunity to have a short break before the lecture
started. The questionnaire took, on average, ten minutes to complete and was
followed by a written debrief that was given to all participants.

The study was carried out in the healthcare domain for two main purposes.
First, to ensure the generalisability of the previous Chapters findings to a different
risk context. Second, the substantive responses explored in this study are commonly
used within the healthcare domain following a transgression (Kellett, Griffith, Bell,
Short & Adshead, 1997; Malugani, 2000; Rowe & Calnan, 2006).

7.2.2 Experimental Task

The experimental vignette method used in Chapters 4 and 5 was used again
here. However, the method was developed in two main ways. First, the material was
presented to participants in a format that aimed to increase the realism of the event.
This was achieved by presenting information about the event in a newspaper clipping
including a face of the senior nurse, and presenting information regarding the
substantive response that followed the event as a memo from the hospital
commissioning board (see Appendix D). Second, measures of trust were taken at two
time points: following information about the event, and again following information
about the substantive response. This allowed the independent effects of the
substantive response on trust attitudes to be identified, which was not possible in the
previous studies as both event and response information were presented together.

Pilot Study

Prior to the main study, a pilot study was carried out with 36 undergraduate
Psychology students to identify a suitable image for use in the newspaper clipping.
The aim was to find an image that was not regarded as untrustworthy. Participants
were asked to rate four photographs on perceived trustworthiness and attractiveness (see Figure 7.2)\textsuperscript{11}. The attractiveness of the person depicted in the photograph was rated as this has been shown to positively influence trustworthiness ratings (van’t Sanfey & Wout, 2008). The photographs were randomly selected from a collection of ‘neutral faces’ available in the Psychological Image Collection at the Psychology Department of Stirling University (http://pics.psych.stir.ac.uk). Two male and two female photographs were used to control for any gender effects. The order in which the photographs were presented to participants was counterbalanced in order to control for any ordering effects. All participants received course credits for taking part in the study.

The females depicted in the photographs were rated as significantly higher on perceived integrity ($M = 4.96, SD = .88$ compared to male photographs: $M = 4.19, SD = .94$); ($t_{142} = -5.13, p < 0.001, d = 0.86$), and as those that the participant would most likely disclose information to ($M = 4.08, SD = 1.27$; compared to male photographs: $M = 3.23, SD = 2.56$); ($t_{142} = -2.54, p < 0.01, d = 0.42$). Pairwise comparisons with bonferroni adjustment revealed that Photograph B was rated as having significantly higher integrity ($M = 4.98, SD = .79$) than Photograph A ($M = 4.17, SD = .88$); ($p < 0.01$) and Photograph D ($M = 4.20, SD = 1.01$); ($p < 0.01$), but not Photograph C ($M = 4.95, SD = .97$); ($p > 0.05$) ($F_{3,140} = 8.68, p < .001, \eta^2 = .01$). Similarly, participants were more likely to disclose information to the person depicted in Photograph B ($M = 4.21, SD = 1.21$) than in Photograph A ($M = 3.41, SD$.

\textsuperscript{11} The trustworthiness of each person in the photograph was rated using validated scales (Gillespie, 2003; Mayer & Davis, 1999).
Figure 7.2: Photographs used in pilot study (Pictures A through D from left to right)

= 2.07); (\(p < 0.01\)), Photograph C (\(M = 3.78, SD = 1.34\)); (\(p < 0.05\)) or Photograph D (\(M = 3.04, SD = 1.09\)); (\(p < 0.01\)); (\(F_{3,140} = 2.41, p < 0.05, \eta^2 = 0.01\)). Finally, no significant differences emerged between any of the photographs on perceived ability, intention to trust, or perceived attractiveness (\(ps > 0.05\)). Based on these findings, Photograph B was used in the newspaper clipping as the senior nurse (Debbie Smith) who engaged in the event that signalled an integrity-based violation.

7.2.3 Manipulations

The event used in the main experimental vignette study related to an insulin-based medical error, in which a senior nurse—Miss Smith—administered an incorrect dose of insulin to a patient. Errors in administering insulin are common within hospitals (Santell, Hicks, & Cousins, 2003), and are often the feature of reports within medical outlets and media reports (Dani, 2011; Tibbetts, 2008). This makes them salient to those operating within this profession; an observation that was supported through a focus group held with six, third-year Nursing students, who reported that medication errors, such as this, are common occurrences within hospitals and more often than not, go unreported due to the culture of blame that exists.
Medication errors may be attributed to a lack of experience, knowledge, or competence (Derr, Sivanandy, Bronich-Hall & Rodriguez, 2007), and so care was taken to introduce the integrity-based violation through actions that were taken in response to the mistake. Participants were informed that the senior nurse falsified paperwork to cover up her error. Falsifying paperwork happens often in the healthcare domain (Gearty, Lesser & Smith, 2009) and is what some refer to as the culture of ‘cover up’ (Gibson & Singh, 2003). Such actions have been shown to reduce integrity-beliefs among employees (Gallagher, Studdert & Levinson, 2007), and were used here to signal a lack of integrity. The nature of the violation was further emphasised by providing participants with information that the senior nurse was competent in her role so that the violation could not be attributed to her incompetence. In order to increase participant’s identification with the event, they were informed that the senior nurse acted as a mentor to trainee nurses. This effectively established the senior nurse’s status as a supervisor, which is the hierarchical level the study is predominantly interested in. Furthermore, participants were not informed that the newspaper article was fictitious until they had completed the questionnaire and were debriefed on the study.

Risk. Two different patient outcomes were used to operationalize low and high-risk conditions. In the low-risk condition, participants were told that as a result of the error, the patient experienced confusion and fainting. In the high-risk condition, participants were told that the error had resulted in the patient spending three days in a coma. Both of these are documented outcomes known to result from wrong injections of insulin (Kruger & Kulkarni, 2007).

Substantive response. One of three responses were presented to participants in the form of a memo. They were informed that Miss Smith’s actions on the ward
were being monitored; that she had been suspended, or, in a control condition, that no action had been taken.

**Outcome Measures**

Participants were asked to rate their trust beliefs and trust intentions to the senior nurse after they had read the newspaper clipping, and again after they had then read the hospital memo. Additional measures were taken following the memo, which measured participants’ trust in the hospital and their perceptions of distributive, procedural justice and perceived repentance of the senior nurse. All responses were made on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7).

*Trust beliefs, Trust Intentions, Intention to Voice.* Trust beliefs, trust intentions and intention to voice were measured using the same scales as described in previous Chapters. The target of reference in the trust intention measures was changed to focus on the patient, rather than the student nurse (e.g., ‘I would be comfortable letting a senior nurse have control over decisions that critically affect the patient’). This was done to more closely fit with the fact that the event had implications for patient’s safety. All scales showed good reliability: ability beliefs: \( \alpha = .88 \); integrity beliefs: \( \alpha = .99 \); trust intentions: \( \alpha = .91 \); and intention to voice: \( \alpha = .85 \).

*Organizational trust.* Participants’ trust in the hospital was measured using three items developed for this study. The items are, ‘I trust this hospital to look out for patients’ safety’, ‘I would be comfortable allowing this hospital to make decisions that directly impact patients’ safety’ and ‘I would let this hospital have control over decisions that affect patients’ (\( \alpha = .92 \)). The items are similar in content
to longer scales focusing on a similar target of trust (Ashford, Lee, & Bobko, 1989; Cook & Wall, 1980).

Mediators

Distributive Justice, Procedural Justice. Distributive and Procedural Justice were measured using six items adapted from Greenberg’s (1993) Organizational Justice scale. Three items were used to measure distributive justice, and an example item is ‘The outcome for Miss Smith following her actions was fair’ (α = .93). Three items were used to measure procedural justice, and an example item is ‘A suitable decision-making process was used to determine what disciplinary action was required’ (α = .90).

Perceived Repentance. Perceived repentance was measured using three items taken from Dirks et al. (2011). An example item from the scale is ‘Miss Smith has learned a valuable lesson from this event’ (α = .88).

Control Variables

Trust Propensity, Trait Trust, Identification, General Voice and Experience in a Hospital. These control variables were measured using the same scales as in Chapters 4 and 5. All scales showed good reliability: trust propensity: α = .80; identification: α = .76; general voice: α = .81.

Justice. Participants’ general beliefs in a just world were also included in the analysis to control for individual differences in beliefs regarding the fairness of disciplinary systems as a whole. This was measured using three items adapted from Dalbert, Montada and Schmitt’s (1987) General Belief in a Just World Scale. This scale measures how much an individual believes that other people get what they deserve. The items were adapted to relate to disciplinary procedures (e.g. Disciplinary procedures used here ensure justice). Example items are ‘I believe that
all groups are treated in the same way during safety investigations’ and ‘The actions taken to discipline people are fair’ ($\alpha = .72$).

7.3 Results

7.3.1 Manipulation checks

Participants responded to three questions that assessed how real they perceived the event to be and their personal experience of such an event. The result showed that participants thought an event such as this could happen within a hospital ($M = 5.28, SD = 1.27$), but reported less agreement to these events being frequent ($M = 3.73, SD = 1.35$), or having personal experience of such an event ($M = 2.66, SD = 1.53$). Therefore, while participants did not have personal experience to draw on when responding to the questionnaire, they did believe in the realism of the event.

Two manipulation check questions were used to assess whether participants recognised the level of risk within the newspaper clipping (high/low) and whether a substantive response was taken (yes/no). The manipulation checks showed that 88% answered the question regarding the level of risk correctly, and 83% answered the question regarding the substantive response correctly. Independent sample t-tests showed no significant difference on any of the outcome measures between those that answered the manipulation check questions correctly and those that answered incorrectly ($n_{\text{risk}} = 16; n_{\text{response}} = 25$) or those that failed to provide an answer ($n_{\text{risk}} = 3; n_{\text{response}} = 3$); ($p > 0.05$). As a result, all responses were retained in the main analysis.¹²

To examine the effectiveness of the event in reducing participants’ trust, mean levels of trust reported at the outset of the questionnaire were compared with

¹² Results of the main analyses excluding the incorrect responses produced the same pattern of results to that when these cases were included.
those reported after reading the newspaper clipping. Paired-sample t-tests show that participants’ ability beliefs were significantly reduced after reading about the event ($t_{163} = 18.88$, $p < 0.001$, $d = 1.49$), as were their integrity beliefs ($t_{163} = 23.95$, $p < 0.001$, $d = 1.88$) and trust intentions ($t_{163} = 21.75$, $p < 0.001$, $d = 1.61$). Moreover, integrity beliefs ($M = 2.41$, $SD = .98$) were significantly lower than ability beliefs ($M = 3.42$, $SD = 1.10$); ($t_{163} = -13.25$, $p < 0.001$, $d = 1.43$), suggesting that the event was regarded as one implicating integrity more than competence. Intention to voice was significantly higher after reading about the event ($t_{163} = -3.41$, $p < 0.001$, $d = -0.27$), which suggests that participants may be more willing to voice their opinions and suggestions when there is a greater need for it following a violation.

In order to assess if the substantive response helped to ‘repair’ trust, participants reported levels of trust in the senior nurse after reading about the event were compared to their trust in the senior nurse after reading about the response taken. Paired sampled t-tests show that initial integrity beliefs ($M = 2.41$, $SD = .98$) significantly increased following suspension and monitoring ($M = 2.66$, $SD = 1.02$), ($t_{162} = -3.89$, $p < 0.001$, $d = 0.30$), but not when action was not taken. This supports the finding of the previous Chapter in that disciplinary action is particularly effective in repairing integrity beliefs. This improvement in beliefs was not dependent upon the action employed or risk involved ($p > 0.05$). No significant differences emerged for ability beliefs, trust intentions or intentions to voice ($p > 0.05$).

A further manipulation check was used to examine how participants’ trust beliefs and intentions differed across conditions of risk. An independent samples t-test showed participants in the high-risk group reported significantly lower ability

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13 Data had been previously screened using histograms to ensure the data were normally distributed. Further, two data points presented as an outlier (i.e., more than 3 SD’s away from the mean) for the outcome measure of integrity beliefs and were removed from the analysis.
beliefs ($M = 3.06, SD = 1.21$ compared to the low-risk group, $M = 3.39, SD = .99$); ($t_{159} = 1.91, p < 0.05, d = 0.30$), and significantly lower integrity beliefs ($M = 2.48, SD = 1.09$ compared to the low-risk group, $M = 2.81, SD = .95$); ($t_{159} = 2.04, p < 0.05, d = 0.32$). The results showed no significant differences in the low and high-risk group on trust intentions, intentions to voice or organizational trust ($ps > 0.05$).

7.3.2 Data analysis
To test the mediation hypotheses depicted in Figure 7.1 (Hypotheses 5-7), a process macro (Hayes, 2012) was used. The macro uses a regression-based analytical framework to estimate the direct and indirect effects of both substantive responses on trust outcomes. Bootstrapping was applied to test the significance of the indirect effects (as recommended by Bollen & Stine, 1990). Bootstrapping is preferable to the causal mediation model (Baron & Kenny, 1986) and the Sobel test (Sobel, 1982), as it has greater power and can avoid type I errors (MacKinnon, Lockwood & Williams, 2004). Furthermore, the assumption of a normal sampling distribution of the indirect effect is not required (Hayes, 2009). The data was re-sampled with replacement 10,000 times and the indirect effect and sampling distribution were obtained from each of these samples. As the mean of the bootstrapped distribution does not exactly equal the indirect effect, bias-corrected confidence intervals were used (upper and lower 10%). If the confidence interval does not contain a zero it can be assumed that the indirect effect is significant (Mackinnon et al., 2004).

Dummy variables were created for the substantive responses so that the effects of monitoring and suspension on the trust outcomes could be compared to the baseline condition of no action. Absolute trust scores taken following information about the response were used rather than difference scores (i.e., between trust post event and trust post response), as the latter have problems associated with their
Table 7.1 Means, standard deviations and correlations between study variables

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*Note. N = 162. Hospital experience measured in years and months. * p < 0.05, ** p < 0.01
reliability, discriminant validity, spurious correlations and variance restriction
(Cronbach & Furby, 1970; Johns, 1981; Peter, Churchill & Brown, 1993). This often
causes them to perform poorly as measures of latent constructs. Further, as the two
measurements of the same variable are positively correlated, research suggests the
reliability of the difference score is often less than the reliability of either
measurement alone. As a result, tests based on difference scores are often
conservative (Jehn & Chatman, 2000).

Within the analyses, control measures that were significantly correlated with
an outcome measure (as shown in Table 7.1), were in turn controlled for within each
model. Firstly, a serial mediation model was used to test Hypotheses 5, which
predicted that the effects of monitoring on trust would be serially mediated by
distributive justice and perceived repentance. In support of this hypothesis, the
results show a significant, positive, indirect effect of monitoring on ability beliefs
(Indirect effect = .16, SE = .06, CI = 0.08, 0.29), on integrity beliefs (Indirect effect =
.12, SE = .05, CI = 0.06, 0.22), and on trust intentions (Indirect effect = .15, SE = .06,
CI = 0.07, 0.28). However, no significant effect was found for intentions to voice (CI
= -0.06, 0.12). Table 7.2 presents the estimated explained variance and pathway
estimates for Hypothesis 5. It also shows the significant control measures.
Interestingly, the results of the analysis show that monitoring has a direct negative
effect on integrity beliefs (Direct effect = -.49, SE = .19, p < 0.05).

These results were compared to models in which single mediation was tested
(e.g., monitoring—distributive justice—trust, or monitoring—repentance—trust).
The results show no significant indirect effect through distributive justice on ability
beliefs (CI = -0.06, 0.26), trust intentions (CI = -0.07, 0.22) and intentions to voice
(CI = -0.21, 0.12). Similarly, no significant indirect effect exists through repentance
only on ability beliefs (CI = -0.18, 0.01), integrity beliefs (CI = -0.16, 0.00), trust intentions (CI = -0.20, 0.00) and intentions to voice (CI = -0.07, 0.02).

Hypothesis 6 made a similar serial mediation prediction for the effects of suspension on trust, but it was predicted that this would only emerge when the risk was high. The data was split according to risk and the analysis was run twice, once on the low-risk group and once on the high-risk group. In partial support of hypothesis 6, the results show that suspension had an effect on distributive justice, which influenced perceptions of repentance and in turn integrity beliefs (Indirect effect = .15, SE = 0.10, CI = 0.05, 0.40) and trust intentions (Indirect effect = .22, SE = 0.11, CI = 0.09, 0.50) following a high-risk violation only. Suspension also had an effect on distributive justice, which influenced perceptions of repentance and in turn ability beliefs following both a low-risk (Indirect effect = .34, SE = 0.16, CI = 0.03, 0.56) and a high-risk violation (Indirect effect = .19, SE = 0.11, CI = 0.07, 0.47). Intentions to voice were affected following a low-risk violation only (Indirect effect = .13, SE = 0.10, CI = 0.01, 0.33).

These results were compared to models in which single mediation was tested (e.g., suspension—distributive justice—trust, or suspension—repentance—trust). The results show no significant indirect effect through distributive justice on ability beliefs (CI = -0.15, 0.56), integrity beliefs (CI = -0.01, 0.56), trust intentions (CI = -0.20, 0.36) and intentions to voice (CI = -0.39, 0.42) following a high-risk violation. Similarly, no significant indirect effect exists through repentance on ability beliefs (CI = -0.21, 0.13), integrity beliefs (CI = -0.19, 0.10), trust intentions (CI = -0.22, 0.16) and intention to voice (CI = -0.05, 0.09). Interestingly, a significant direct negative effect of suspension on integrity beliefs emerged in both the low-risk (Direct effect = -.62, SE = .24, p < 0.01) and high-risk condition (Direct effect = -0.69,
SE = .31, \( p < 0.05 \). Table 7.3 presents the estimated explained variance and pathway estimates for Hypothesis 6. It also shows the significant control measures.

Hypothesis 7 predicted that procedural justice would mediate the relationship between monitoring and organizational trust. In support of this hypothesis, a significant indirect effect was found for procedural justice on organization trust (Indirect effect = .35, SE = .12, CI = 0.12, 0.61). Table 7.4 shows the explained variance, pathway estimates and significant control measure of justice beliefs.

Hypothesis 7 also predicted that procedural justice would mediate the relationship between suspension and organizational trust only when the risk was high. In contrast to this prediction, procedural justice mediated the relationship between suspension and organizational trust in both the low-risk condition (Indirect effect = .75, SE = .17, CI = 0.49, 1.05) and the high-risk condition (Indirect effect = .67, SE = .18, CI = 0.41, 1.00). This model was re-tested without including risk as a moderator and an indirect effect of suspension on organization trust, through procedural justice was found (Indirect effect = .71, SE = .14, CI = 0.50, 0.98), suggesting risk is not a significant moderator. Table 7.5 shows the estimated explained variance, pathway estimates for this hypothesis and the significant control measure.

### 7.4 Discussion

The primary aims of this Chapter were first, to examine whether the substantive responses of monitoring and discipline (i.e., suspension) are effective at repairing student nurses’ trust in a supervisor following an integrity-based violation and second, to identify possible mediators of this effect. The results showed that both substantive responses have a significant negative impact on integrity beliefs, but no effect on other dimensions of trust. Further, they show a positive indirect effect
through distributive justice and repentance. These findings suggest that the substantive responses of monitoring and suspension are effective in repairing employee trust so long as they are perceived to be fair. When perceptions of fairness exist, employees are likely to see these responses as effective learning tools, which lead to the transgressor being more repentant and engaging in more trustworthy behaviours. Importantly, perceived fairness does not lead directly to trust, but has its effects through perceived repentance. Similar to studies focusing on an apology, the findings reported here show repentance to be an immediate antecedent of trust (De Cremer & Schouten, 2008; Dirks et al., 2011; Ohtsubo & Watanabe, 2009). One implication of this finding is that substantive responses should be proportionate to what the person has done wrong in order to generate beliefs of repentance, and hence positively impact employee trust. In support of this, the current study showed that suspension had an effect on integrity beliefs and trust intentions by generating perceptions of distribute justice and perceived repentance only when the risk was high. However, when the risk was low, perceptions of fairness had no significant effect on perceived repentance.

In contrast to this positive effect, the results show that monitoring and suspension have a direct negative effect on integrity beliefs. This negative effect found contrasts with research in other areas (Bottom et al., 2002; Dirks et al., 2011; Gillespie & Dietz, 2009; Schweitzer & Ho, 2005; Slovic, 1993). However, evidence exists to suggest that monitoring and suspension can, paradoxically, increase or decrease trust and that this effect is largely determined by individual interpretations of the response (Grote, 2001; Schweitzer & Ho, 2005). In isolation, these substantive responses may serve to further reduce trust if they are interpreted as being indicative
Table 7.2
Pathway estimates for hypothesis 5

<table>
<thead>
<tr>
<th></th>
<th>Ability Beliefs</th>
<th>Integrity Beliefs</th>
<th>Trust Intentions</th>
<th>Intentions to Voice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$R^2$</td>
<td>DJ</td>
<td>Repentance</td>
<td>Ability</td>
</tr>
<tr>
<td>Monitoring</td>
<td>.21</td>
<td>1.01***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DJ</td>
<td>.22</td>
<td>.52***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repentance Experience on Ward</td>
<td>.42</td>
<td>.30***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification</td>
<td>-.13***</td>
<td></td>
<td></td>
<td>-.09**</td>
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</tbody>
</table>

*Note. Parameter estimates are unstandardized coefficients. * $p < .05$. ** $p < .01$. *** $p < .001$
Table 7.3
Pathway estimates for hypothesis 6

<table>
<thead>
<tr>
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<th>Integrity Beliefs</th>
<th>Trust Intentions</th>
<th>Intentions to Voice</th>
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<td>Repentance</td>
<td>Ability</td>
</tr>
<tr>
<td>Low-Risk</td>
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<td>DJ</td>
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<td>1.30***</td>
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<td>Repentance</td>
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<td>.61***</td>
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<td>Identification</td>
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<tr>
<td>General Voice</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>High-Risk</td>
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</tr>
<tr>
<td>DJ</td>
<td>.25</td>
<td>1.59***</td>
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<td>.27</td>
</tr>
<tr>
<td>Repentance</td>
<td>.23</td>
<td>.43**</td>
<td></td>
<td>.23</td>
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<tr>
<td></td>
<td>.35</td>
<td>.28*</td>
<td>.35</td>
<td>.23</td>
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<tr>
<td>Experience on Ward</td>
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<td>Gen Voice</td>
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Note. Parameter estimates are unstandardized coefficients. * $p < .05$. ** $p < .01$. *** $p < .001$
### Table 7.4
Pathway estimates for hypothesis 7

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<th>PJ</th>
<th>Organizational Trust</th>
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<tbody>
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<td>1.09***</td>
<td></td>
</tr>
<tr>
<td>PJ</td>
<td>.26</td>
<td>.59***</td>
<td></td>
</tr>
<tr>
<td>Justice</td>
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<td>.53***</td>
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</tr>
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</table>

*Note. Parameter estimates are unstandardized coefficients. *** $p < .001$*

### Table 7.5
Pathway estimates for hypothesis 7

<table>
<thead>
<tr>
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<th>Low-Risk</th>
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<th>High-Risk</th>
<th></th>
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</thead>
<tbody>
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<td>PJ</td>
<td>Organizational Trust</td>
<td>$R^2$</td>
</tr>
<tr>
<td>Suspension</td>
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</tr>
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<td>PJ</td>
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<td>.74***</td>
<td></td>
<td>.29</td>
</tr>
<tr>
<td>Justice</td>
<td></td>
<td>.46**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Parameter estimates are unstandardized coefficients. *** $p < .001$*

DJ=Distributive Justice; PJ = Procedural Justice
of the organizations interpretation of the events (i.e., that the supervisor is not trusted), which shapes their own beliefs about the target.

In addition to interpersonal trust (i.e., towards the supervisor), the study also considered how monitoring and suspension impacted trust towards the organization. Given that the substantive responses were initiated by the organization, it is quite possible that employees’ trust in this target would be affected. The results showed that monitoring and suspension positively impacted employees’ trust in the organization by increasing perceptions of procedural justice. These findings highlight the importance of fair procedures for maintaining employee trust in the organization (Cohen-Charash & Spector, 2001).

Across the results it was found that neither substantive responses nor their mediators had an impact on voice behaviour. In fact, reported intentions to voice increased after reading the newspaper clipping. Research shows that voice behaviour increases following felt obligations to normative pressures, including moral norms (Conner & McMillan, 1999). Furthermore, voice behaviour has been demonstrated to play an important role in crisis prevention (Schwartz & Wald, 2003), therefore student nurses may feel that by speaking up they can help prevent future violations from occurring, ultimately protecting patient safety.

Similar to other research, experience on a ward, trait trust and identification were also important in predicting trust (Guohong Han & Harns, 2010; McKnight, Kacmar & Choudhury, 2004; Pavlou & Gefen, 2000; Straiter, 2005; Tyler & Blader, 2000). Just beliefs were also found to play a role in organizational trust. Specifically, those who held strong justice beliefs were more likely to view the organization as trustworthy.
Limitations & Future Directions

This study showed the effects of two discipline strategies in ‘repairing’ individuals’ trust following an integrity-based violation. Despite its insights, the study was carried out with a student sample, some of whom may have limited experience or knowledge of procedures from which to base their perceptions. Adams (2002) observed that students who undertake multiple placements typically raise concerns regarding the lack depth that is acquired in comparison to what would have been gained from a consistent placement. While this observation was likely levelled at role-specific expertise, there is no reason to expect that it would not also apply to procedures more generally. Attempts were made in the current study to mitigate this problem by using student nurses with some experience of working on a hospital ward. However, as no distinction was found in the effects of procedural justice in low and high-risk conditions participants may have been unable to make an informed decision. In an attempt to overcome this, the next study will recruit an employee sample who are likely to have greater knowledge of procedures used in the implementation of disciplinary action.

The study also showed the absolute effects of monitoring and suspension, when compared to no action. The next step would be to show how these responses compare to procedures and an apology. The results of previous Chapters suggest that both are effective. However, there is a need to test this empirically. The next chapter will address this by including monitoring, suspension, a preventative procedure and the non-substantive response of an apology in trust repair attempts in order to compare their relative effects.
Conclusion

This study examined whether or not monitoring and discipline (in particular suspension) are effective in ‘repairing’ trust. The results identified monitoring and suspension as responses that increase interpersonal trust through perceptions of justice and repentance. However, the results show that suspension, as with monitoring, are responses that may also reduce trust (particularly integrity beliefs), if they are not accompanied by assumed or real displays of regret and commitment to change. When such repentance is absent, these substantive responses may be interpreted as being indicative of the organization’s interpretation of the events (i.e., that the supervisor is not trusted), which serves to further emphasise, and possibly support cognitions that the person is untrustworthy.
CHAPTER EIGHT
The Relative Importance of Monitoring, Disciplinary Action and a Preventative Procedure in Repairing Trust

This Chapter brings together the findings from the previous studies to test a more complete model of trust repair in which both substantive and non-substantive responses are considered. It looks at the effects of monitoring, suspension and a preventative procedure to see how they uniquely and collectively influence trust when applied to the same scenario. It also considers the effects of these responses when they are considered alongside an apology to see if they contribute anything above and beyond a non-substantive response. The results from Chapter 6 suggest that they do. To understand the processes underlying these relationships, the role of repentance, prevention and retributive justice as mediating processes are considered.

8.1 Introduction

The findings of previous Chapters, in addition to published research, shows an important role for the non-substantive response of apology and the substantive responses of a preventative procedure, suspension and monitoring in trust repair (Bottom et al., 2002; Dirks et al., 2011; Kim, et al., 2004; Nakayachi & Watabe, 2005; Slovic, 1993; Schweitzer & Ho, 2005). These responses act to increase perceptions that the transgressor is repentant (Dirks et al., 2011), either directly or indirectly through their influence on employees’ perceptions of distributive justice (Chapter 7), and it is this that influences employees’ trust. There is also the suggestion (as yet untested in relation to some of these substantive responses) that these responses may operate through more than one route, such that they shape trust attitudes through perceptions of prevention and/or retributive justice (Carlsmith,
Darley & Robinson, 2002; Sitkin & Roth, 1993). These processes are the focus of this study.

Dirks et al. (2011) propose that substantive responses such as monitoring and procedures help to repair trust simply because they increase perceptions that future untrustworthy behaviour has been prevented. Monitoring deters a person from acting untrustworthy, as management regularly observe their behaviour (Ferrin, Kim, Cooper, & Dirks, 2007). Similarly, a preventative procedure sets parameters around a person’s actions to prevent untrustworthy behaviour (McEvily et al., 2003; Shapiro, 1987). According to theories of organizational control these constraints are the primary mechanisms through which organizations can limit employee opportunism and promote goal congruence (Eisenhardt 1985; Ouchi 1979; Snell, 1992). Applied to trust repair, it may be argued that monitoring and procedures limit (or prevent) another (i.e., supervisor) from engaging in further transgressions, which increases employees’ beliefs regarding a supervisor’s trustworthiness, and perhaps more so, their willingness to rely on that supervisor.

Hypothesis 8: Perceived prevention mediates the relationship between monitoring and a preventative procedure on employee trust.

A second route through which procedures may operate is repentance. Repentance is implicated in situations in which a response is regarded as voluntary, as the volitional nature of the act signals a person’s dedication to reform (Desmet et al., 2011). The fact that this act is attributed to the person rather than external sources provides important information about the person’s character, and helps to restore beliefs about their trustworthiness (Tomlinson & Mayer, 2009). Support for the importance of volition in the effects of repentance comes from Chapter 7, in which monitoring and suspension (which are not voluntary actions) were not mediated
directly by repentance. It also comes from previous research, which shows repentance to be the route through which an apology has its effects (Dirks et al., 2011; Study 4 and 5). When applied to preventative procedures, these findings suggest that such responses have the potential to increase employee’s trust in supervisors if the supervisor initiates the procedure. In such cases, it might be predicted that:

Hypothesis 9: Perceived repentance mediates the relationship between a voluntary preventative procedure (i.e., asking for a procedure to be put in place) and employee trust.

Disciplinary actions, such as suspension, operate in part by influencing employees’ perceptions of justice and associated beliefs that the person will reform. In the previous Chapter, this was shown with distributive justice. However, it may also operate through other justice perceptions, such as those related to retribution. Similar to distributive justice, retributive justice is concerned with the imposition of fair punishment that ensures an individual gets their ‘just deserts’ (Carlsmith, Darley & Robinson, 2002; Okimoto & Wenzel, 2009). However, individual constitutions do not establish the ‘desert basis’ for distributive justice’. Instead, organizations often apply a just culture model which ensures implemented actions are relative to that which others have received and fairness perceptions are generated. On the other hand, retributive justice appeals to an independent notion of ‘desert.’ Fairness perceptions are generated from implemented actions that are specific to the individual case and the features of the violation itself (Scheffler, 2001). When employees’ believe the supervisor has received their ‘just deserts,’ they may expect greater repentance from the supervisor and a greater commitment to demonstrate
Hypothesis 10: The relationship between suspension and trust is serially mediated by retributive justice and repentance.

Trevino and Brown (2005) propose that when an organization disciplines wrongful acts, it provides a powerful signal to employees about organizational norms. The organization demonstrates to employees that they are concerned about their interests and feelings regarding the event and they are using their discretionary powers appropriately to take proportionate action against the transgression. This can help restore the social bonds of trust by enforcing higher morality (Sampson, 2003) and communicate a set of standards which the organization expect others to adhere to, re-asserting the organization’s values and beliefs (Michael, 1992). Positive perceptions of organizational principles are therefore held which effectively increases organizational trust (Tenbrunsel, Wade-Benzoni, Messick, & Bazerman, 2000). It is therefore proposed that:

Hypothesis 11: Retributive justice mediates the relationship between suspension and organizational trust.

8.2 Methods

8.2.1 Participants and procedure

Participants were 240 rail technicians recruited from 9 sites operated by a single organization. One hundred and forty-seven participants were male and 10 participants were female (83 participants failed to disclose this information). Participants had a mean age of 41.28 years ($SD = 10.22$), had worked in the industry for between 6 and 10 years and in the organization for 5 to 6 years. On average
participants had worked under their current supervisor for between 2 and 3 years. Analysis showed that with exception of intentions to voice, participants did not differ on any of the outcome measures across locations ($ps < 0.05$).\textsuperscript{14} Data were therefore combined into a single sample.

Participants were recruited with the help of the Health Safety Quality and Environmental manager of the organization who forwarded information regarding the study to maintenance managers at each site. Maintenance managers briefed on-site technicians about the survey during daily safety meetings. They informed them that a short safety survey was being carried out looking at employees’ views on safety-related issues at work. They were informed that the survey was being conducted through the use of an online questionnaire, which took approximately 15 minutes to complete. The fact that the completion of the survey was voluntary and all responses were anonymous and confidential was emphasised. Interested participants were given a letter which re-stated these details, a link was also provided to the online survey. Employees were given time to complete the survey during work time. Participants were also able to complete the survey at home if they preferred.

\textit{8.2.2 Experimental task}

Using a similar vignette method to that employed in Chapter 7, participants were provided with information about an integrity-based violation by a supervisor followed (in a later section of their questionnaire) with information on the response taken. Information about the event was presented as an excerpt from a rail newsletter (see Appendix E). Newsletters are commonly used within the rail industry, including

\textsuperscript{14} Data had been previously screened using histograms to ensure the data were normally distributed. Further, as four data points presented as an outlier (i.e., more than 3 SD’s away from the mean); two for the outcome measure of ability beliefs and two for the outcome measure of intention to voice, these data points were removed from the analysis.
the organization recruited in this study, and were therefore a familiar medium to those who completed this study. The event related to a supervisor who failed to carry out a systematic examination of a job task, which identifies and controls for potential hazards (referred to as the ‘Safe Systems at Work’ within the newsletter). This type of risk assessment is commonly employed in the rail industry to minimize risk and ensure safe practices (Johnson & Shea, 2007). Participants were informed that the supervisor skipped the procedure in order to speed up production and as a result, two employees were assigned to complete a job when a minimum of three employees were needed to complete it safely. Inappropriate staffing levels are often a cause of accidents and errors within the rail industry (Baysar, McIntosh & Wilson, 2008), and are often related to unsafe supervision (Wiegmann & Shappell, 2003). To ensure the described transgression was attributed to the supervisor and not external pressures, it was made explicit there were no obvious reasons for skipping this safety procedure, such as a backlog of work. Additionally, and to increase the lack of integrity evident in the event, it was stated that the supervisor acted ‘recklessly’ and had a total disregard for others’ safety. Information about the response taken was presented to participants in the form of a statement from the named supervisor. The statement made clear the supervisor’s own response, and that of the company. As with the study in Chapter 7, separating the act from the response allowed the changes in trust following the response to be ascertained. Across all conditions, participants were informed that the supervisor had apologised for the event. This was held constant to check if substantive responses were still effective in increasing trust following an integrity-based violation in the presence of an apology. Each participant received one version of the event and one version of the response.
8.2.3 Manipulations

Substantive response. Participants were informed that the supervisor was either suspended or was being monitored as a result of the event. In addition, they were informed that a procedure had been put in place to prevent similar events occurring in the future. To increase the ecological validity of the response, participants were informed that the preventative procedure was a system that recorded the systematic examination of job tasks and flagged up any conflicting logs that failed to comply with organizational safety procedures. This procedure is used within other industries, similarly defied by high risk, as a means to ensure safety regulations and rules are complied with (Chapter 6; interviews). Further, industries are known to share methods for improving safety (Kosnik, Brown & Maund, 2007). Participants were informed that the procedure was implemented following a request from the named supervisor (to reflect a voluntary condition), or was imposed by the company (to reflect an involuntary condition).

Outcome Measures

Participants were asked to imagine they worked with the supervisor and rate their trust beliefs, trust intentions, and intention to voice towards them at two different time points: after reading the rail newsletter and again after reading the statement describing the response. Participants also rated their trust in the organization and perceptions of repentance, prevention and retributive justice following the statement. All responses were made on a 7-point scale ranging from ‘Very strongly disagree’ (1) to ‘Very strongly agree’ (7).

Trust beliefs, Trust Intentions, Intention to Voice. These measures were taken using the same scales as employed in previous chapters. Intention to trust was measured in relation to the employee (e.g., I would be comfortable letting my
supervisor have control over decisions that critically affect me) to reflect the current context and the source that is most at risk (i.e., the employee). All scales showed strong reliability: ability beliefs: \( \alpha = .90 \); integrity beliefs: \( \alpha = .89 \); trust intentions: \( \alpha = .97 \); and intention to voice: \( \alpha = .97 \).

Organizational Trust. Trust in the organization was measured using the same scale as described in Chapter 7. The scale demonstrated reasonable reliability: organizational trust: \( \alpha = .69 \).

Mediators

Perceived Repentance. Perceived repentance was measured using three items taken from Dirks et al.’s (2011) Perceived Repentance scale, as described in the previous chapter (\( \alpha = .68 \)).

Perceived Prevention. Perceived Prevention was measured using three items. Two items were taken from Dirks et al. (2011): ‘The actions taken will NOT prevent the supervisor from engaging in similar acts’ (reverse-scored) and ‘The actions taken will prevent the supervisor from carrying out a similar act.’ A third item was also developed to increase the reliability of the scale, and read, ‘The actions taken will deter the supervisor from engaging in similar actions.’ The scale shows good reliability: \( \alpha = .76 \).

Retributive justice. Retributive justice was measured using three items taken from the Justice Orientation Scale (Okimoto, Wenzel & Feather, 2012). Example items are ‘The only way to restore justice was to punish the supervisor’ and ‘The supervisor deserved to be punished’. The scale demonstrated good reliability: \( \alpha = .73 \).
Control Variables

*Trust Propensity, Trait Trust, Identification with supervisor, Safety Compliance, General Justice Beliefs, Years in Industry, General Voice.* Control variables were measured using the same items as described in previous chapters. All scales showed good reliability: trust propensity: $\alpha = .75$; identification: $\alpha = .76$; safety compliance: $\alpha = .93$; general just beliefs: $\alpha = .77$, and general voice: $\alpha = .79$.

8.3 Results

8.3.1 Manipulation checks

Participants responded to three questions that assessed how real they perceived the event to be and their personal experience of such an event. Participants agreed that the event was something that could happen in reality ($M = 5.07$, $SD = 1.25$), and somewhat agreed that it is an event that occurs often in their current company ($M = 3.53$, $SD = 1.30$). Of those who participated, 27.22% had experience of a similar event to that described in the newsletter (67.22% had no experience and 5.56% did not provide an answer). Finally, participants agreed that the supervisor named in the newsletter had a choice not to violate the Safe Systems of Work ($M = 4.92$, $SD = 1.18$), suggesting that an internal attribution for the event was likely.

Three manipulation check questions were used to assess whether participants recognised the non-substantive response (apology) and substantive response (monitoring/suspension/procedure). The manipulation checks showed that 93% correctly answered the question regarding the non-substantive response question, 82% correctly identified if the supervisor was suspended or monitored, and 92% correctly identified if the procedure was voluntarily or involuntarily imposed. Independent sample t-tests showed significant differences in reported intentions to voice in those who answered the manipulation check questions incorrectly; apology
question: $t_{225} = 2.05, p < 0.05, d = .27$; and procedure question: $t_{225} = 2.76, p < 0.01, d = .36$. Differences were also found for organizational trust in those who answered incorrectly to the apology question, $t_{225} = -2.84, p < 0.01, d = .38$, and who failed to provide an answer for the procedure question, $t_{222} = -2.30, p < 0.05, d = .31$. In relation to monitoring and suspension, participants who answered this question correctly reported significantly different ability beliefs: $t_{224} = 1.95, p < 0.05, d = 0.26$; integrity beliefs $t_{224} = 2.39, p < 0.05, d = 0.32$, intentions to voice: $t_{225} = 3.15, p < 0.01, d = 0.42$ and organizational voice: $t_{225} = 2.02, p < 0.05, d = .27$, than those who answered incorrectly. A significant difference was also found between those who answered correctly and those who failed to provide an answer for the outcome measure of organizational trust: $t_{195} = -2.76, p < 0.01, d = 0.39$. As a result, data from participants who answered the manipulation checks incorrectly, or failed to provide an answer, were removed from the analysis. This left a total of 180 cases to be used in the main analysis.

To examine the effectiveness of the event in reducing participants’ trust, mean levels of trust reported at the outset of the questionnaire were compared with those reported after reading the newsletter. Paired samples t-tests show that participants’ ability beliefs: $t_{178} = 17.73, p < 0.001, d = 1.75$; integrity beliefs: $t_{178} = 16.79, p < 0.001, d = 1.72$; trust intentions: $t_{178} = 16.66, p < 0.001, d = 1.46$; and intentions to voice: $t_{179} = 4.85, p < 0.001, d = 0.47$, were significantly reduced after reading the newsletter. Moreover, participants integrity beliefs ($M = 3.04, SD = 1.29$) were significantly lower than their reported ability beliefs ($M = 3.16, SD = 1.36$) ($t_{179} = 2.88, p < 0.01, d = 0.09$), suggesting that they attributed the event more to the supervisor’s lack of integrity as opposed to lack of competence.
8.3.2 Data analysis

An analysis was carried out to look at the relative effects of the different substantive responses on trust, and to see if these contributed anything beyond an apology. If the changes in trust were due only to an apology, then no effects for the substantive responses would emerge as apology was held constant across all conditions. The four measures of trust (ability beliefs, integrity beliefs, trust intentions and intentions to voice) were tested in four separate models as the criterion variable. Monitoring, suspension and procedure were included as predictor variables, as were the control measures (e.g., trust propensity) that were significantly related to the trust outcome (see Table 8.1). No evidence of multi-collinearity between the predictor variables was shown, with VIF co-efficients under 5 (Menard, 1995). Further, no discernable pattern emerged amongst residuals when plotted using scatterplots, suggesting residuals were random.

In order to assess if the substantive response helped to ‘repair’ trust, participants’ levels of trust after reading about the event was compared to their trust after reading about the response taken. Paired samples t-tests showed that all outcome measures significantly improved after reading the statement about the response taken: ability beliefs: $t_{178} = 7.56, p < 0.001, d = 0.62$; integrity beliefs: $t_{178} = 8.99, p < 0.001, d = 0.78$; trust intentions: $t_{179} = 8.38, p < 0.001, d = 0.55$; and intention to voice: $t_{179} = 5.05, p < 0.001, d = 0.39$. This improvement in beliefs was not dependent upon the type of response employed ($p > 0.05$).
Table 8.1
Means, standard deviations and correlations between study variables

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<th>Variable</th>
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<td>-.07</td>
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Note. N = 180. Years in industry measured in years and months. * p < 0.05, ** p < 0.01, *** p < 0.001
The analysis took the form that control variables were entered at Step 1 and substantive responses were entered at Step 2. The results in Table 8.6, Step 2, show that suspension is more effective than monitoring in predicting employees’ ability beliefs, integrity beliefs, trust intentions and intentions to voice (Adjusted $R^2_{\text{ability}} = .27$; Adjusted $R^2_{\text{integrity}} = .28$; Adjusted $R^2_{\text{intentions}} = .21$; Adjusted $R^2_{\text{voice}} = .19$).

However, a voluntary procedure was no more effective than an involuntary procedure. Further, when monitoring, suspension and a procedure are considered in the same model, a procedure is no longer significantly related to trust beliefs or trust intentions.

In order to establish whether any of the substantive responses had an indirect effect, in addition to their direct effect, hypothesised relationships were tested using a Process Macro (Hayes, 2012; see Chapter 7). Absolute trust scores that were taken after participants read the statement of response were regressed on each substantive response (each response was tested in a different model) and the control measures that were significantly correlated with the outcome measure (as shown in Table 8.1). Bootstrapping was applied to test the significance of the indirect effects. The data was re-sampled with replacement 10,000 times and bias-corrected confidence intervals were used to interpret the significance of the results.

Hypothesis 8 predicted that perceived prevention mediates the effects of monitoring and a procedure on employee trust. The results failed to support this prediction. No significant indirect effects of monitoring, via perceived prevention, exist on ability beliefs (90% C.I. = -0.06, 0.01), integrity beliefs (90% C.I. = -0.05, 0.01), trust intentions (90% C.I. = -0.01, 0.09) or intentions to voice (90% C.I. = -0.14, -0.01). However, monitoring does have a direct negative effect on ability beliefs (direct effect = -.35, SE =.12, $p < 0.01$), integrity beliefs (direct effect
### Table 8.2
Results of hierarchical regression analysis

<table>
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<tr>
<th>Ability Beliefs</th>
<th>Integrity Beliefs</th>
<th>Trust Intentions</th>
<th>Intentions to Voice</th>
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<td>Justice</td>
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<tr>
<td>Intention to Voice</td>
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<tr>
<td><strong>Step 2</strong></td>
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<tr>
<td>Trust Propensity</td>
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</tr>
<tr>
<td>Justice</td>
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</tr>
<tr>
<td>Intention to Voice</td>
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</tr>
<tr>
<td>Monitoring/Suspension</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Procedure</td>
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</table>
Similarly, no significant indirect effects emerge for a procedure (involuntarily or voluntarily imposed), through preventative beliefs, on participants’ ability beliefs (90% C.I. (invol.) = -0.01, 0.05; 90% C.I. (vol.) = -0.05, 0.01), integrity beliefs (90% C.I. (invol.) = -0.01, 0.04; 90% C.I. (vol.) = -0.005, 0.01), trust intentions (90% C.I. (invol.) = -0.05, 0.01; 90% C.I. (vol.) = -0.01, 0.07) or intentions to voice (90% C.I. (invol.) = -0.04-0.08; 90% C.I. (vol.) = -0.11, 0.02). No significant direct effects were found for a procedure (involuntarily or voluntarily imposed) on participants trust beliefs or intentions. Table 8.3 shows the explained variance and pathway estimates related to hypothesis 8, including significant control measures.

Hypothesis 9 predicted that perceived repentance mediates the relationship between a voluntary procedure and participants’ trust. The results show a direct effect of repentance on participants’ ability beliefs (direct effect = .10, SE = .03, p < 0.01) and integrity beliefs (direct effect = .11, SE = .03, p < 0.001). However, this does not mediate the effects of a voluntarily imposed procedure on ability beliefs (90% C.I. = -0.02, 0.13), integrity beliefs (90% C.I. = -0.03, 0.16), trust intentions (90% C.I. = -0.01, 0.13), or intentions to voice (90% C.I. = -0.01, 0.09) (See Table 8.4 for explained variance and pathway estimates).

Hypothesis 10 proposed that retributive justice and repentance serially mediate the effects of suspension on trust. The results failed to support this prediction. No significant indirect effect was found for ability beliefs (90% C.I. = -0.10, 0.00), integrity beliefs (90% C.I. = -0.01, 0.00), trust intentions (90% C.I. = -0.01, 0.00), or intentions to voice (90% C.I. = -0.01, 0.00). Instead a direct positive effect of suspension on ability beliefs (direct effect = .32, SE = .13, p < 0.01) and
Table 8.3
Pathway estimates for hypothesis 8

<table>
<thead>
<tr>
<th></th>
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<th>Intentions to Voice</th>
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<td>.04</td>
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<td>.16**</td>
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*Note. TP = trust propensity. Parameter estimates are unstandardized coefficients. *p < 0.05. ****p < .001*
integrity beliefs (direct effect = .20, SE = .12, p < 0.05) emerged (see Table 8.5 for the explained variance and pathway estimates).

These results were compared to models in which single mediation was tested (e.g., suspension—retributive justice—trust, or suspension—repentance—trust). The results show no significant indirect effect through retributive justice on ability beliefs (90% C.I. = -0.01, 0.06), integrity beliefs (90% C.I. = -0.01, 0.06), trust intentions (90% C.I. = -0.04, 0.13) or intentions to voice (90% C.I. = -0.07, 0.01). Similarly, no significant indirect effect exists through repentance only on ability beliefs (90% C.I. = -0.03, 0.07), integrity beliefs (90% C.I. = -0.04, 0.08), trust intentions (90% C.I. = -0.01, 0.09) or intention to voice (90% C.I. = -0.01, 0.06).

Hypothesis 11 predicted that retributive justice mediates the relationship between suspension and organizational trust. No significant indirect effect was found (90% C.I. = -0.01, 0.06), and no direct effect (see Table 8.6 for variance and pathway estimates).

8.4 Discussion

The aim of this Chapter was to bring together the findings of the previous studies and test a more complete model of trust repair. Firstly, the Chapter aimed to identify how monitoring and suspension operate alongside a procedure to repair employee trust in supervisors. Secondly, it aimed to test potential mediators through which these response strategies operate. The results showed that monitoring and suspension have a stronger effect on employees’ trust beliefs and intentions and suspension has a direct positive effect. In support of Chapters 6 and 7, the results show that monitoring has a direct negative effect on employees’ trust beliefs and intentions and suspension has a direct positive effect. No indirect effects were found through any of the processes (repentance, prevention and retributive justice) tested.
Table 8.4
Pathway estimates for hypothesis 9

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<td>Propensity</td>
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| General Voice       |       |          |         |       |          |         |       |          |                 |       |           | .26                | **

Note. Parameter estimates are unstandardized coefficients. ** $p < .01$. *** $p < .01$. 
Table 8.5
Pathway estimates for hypothesis 10

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Note. Parameter estimates are unstandardized coefficients. ** $p < .001$
Table 8.6  
Pathway estimate for hypothesis 11

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<td>Propensity</td>
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</table>

*Note. Parameter estimates are unstandardized coefficients.*** $p < .001$
The findings pertaining to monitoring contrast with those found in other areas in which monitoring has been shown to increase trust (Bottom et al., 2002; Dirks et al., 2011; Gillespie & Dietz, 2009; Schweitzer & Ho, 2005; Slovic, 1993). The reason for this difference is unclear. One speculation is that monitoring may only be a positive response to employ in contexts that are not defined by physical risk. In these contexts more preventative measures may be warranted which can physically stop a violation from occurring as opposed to simply regulate behaviour. A second, tentative, explanation is that the positive direct effects of monitoring are reversed when combined with an apology due to the effects that the latter has in relation to how monitoring should be interpreted (see Discussion of Chapter 6). Evidence hinting at this being possible is the finding in the previous Chapter that monitoring had a positive indirect effect on trust (note, that an apology was not presented in this study), which was lost in this Chapter (when an apology was presented). It is true that the mediator processes that were considered in the two studies differed and that this may be responsible for the lack of replication. However, an unreported analysis of serial mediation of monitoring through retributive justice and repentance (not presented in the results section), showed no significant effects. Arguably this relationship is very similar to the one proposed in the previous study, which was found to be significant. Future research would benefit from understanding this complexity in more detail.

A number of predictions were made regarding the processes underlying the effects of substantive responses on trust. Based on existing research, it was predicted that monitoring and procedures would operate through perceived prevention, voluntary procedures would operate through repentance, and suspension would operate through retributive justice followed by perceived repentance. However, the
results failed to support these effects. In relation to perceived prevention, Dirks et al. (2011) proposed that perceived prevention addresses untrustworthy actions directly, but it does not identify whether the underlying cause of behaviour has been corrected and if an individual has repented. As a result, employees are left unsure as to whether the individual will reoffend again by skirting the system. This may explain the results in relation to monitoring and a preventative procedure. In the description of these responses, it was not made explicit that the systems could not be over-ridden.

Interestingly, the results of this Chapter showed that employees' trust did not differ between those who were presented with information about a voluntary procedure and those who were presented information about an involuntary procedure. This supports the findings of Chapters 4 and 5, which showed that the nature of the procedure is less important when it concerns trust repair in supervisors. Furthermore, low levels of identification reported towards supervisors in the current sample may help explain why a voluntary procedure did not communicate repentance as a request emanated from the supervisor is likely to be perceived as similar to a request emanated by the organization.

In regards to suspension, no effects on employee trust were found through retributive justice or perceived repentance. This finding suggests that employees may simply need to perceive that a response is implemented according to a just culture model. This ensures the response is relative to the treatment others have/would receive (as seen in Chapter 7), rather than a response perceived as fair based on individual notions. Furthermore, as individuals held low levels of trust in the organization (as shown in relatively low levels of baseline organizational trust reported in the current sample), scepticism concerning the sustainability or
effectiveness of the action may be more likely. For example, Folger and Cropanzano (1998) found that employees only perceive justice when they believe the organization is credible and trustworthy.

The study also provided a number of important findings in relation to control measures. Justice beliefs concerning disciplinary procedures significantly predicted supervisory and organizational trust. This ties in closely with the organizational justice literature which has shown that fairness beliefs impact upon trust (Gilbert & Tang, 1988; Van Prooijen, Gallucci & Toeset, 2008). The study also found that trust propensity and trait trust were positively related to intention to voice, which is consistent with studies that have found that trust increases safety specific behaviours such as voice (Van Dyne & LePine, 1998).

Limitations and future directions

Despite the advantages associated with this study, the action implemented included both an apology and a substantive response together as a result of sample restrictions constraining the number of possible conditions. Due to this, it was not possible to isolate the effects of the substantive responses from an apology, or to test the effects of an apology and substantive responses when operating side by side. However, the study effectively addressed the main aims of the thesis by exploring whether the specified substantive responses offered anything above and beyond an apology. Nevertheless, future work may consider exploring how these (non)substantive responses compare when included separately in a model.

Finally, although the study showed that the nature of the procedure (i.e., whether voluntary or involuntary imposed) is less important when it concerns trust repair in supervisors, it did not show (due to sample size restrictions) how a procedure per se compares to no procedure. An analysis of this sort may reveal a
main effect for procedure when considered alongside the other response strategies. Future work would benefit from examining this possibility.

Conclusion

The Chapter aimed to test the relative effectiveness of a number of different substantive responses in the repair of employee trust when combined with an apology, and identify the potential mechanisms through which they operate. The results showed a number of routes through which substantive responses do not operate, but unfortunately, failed to find a route through which they do. They did, however, show monitoring and discipline were most effective in repairing trust in comparison to a procedure. However, when these responses were considered in isolation, monitoring had a direct negative effect on trust beliefs and suspension and a positive effect on trust beliefs. This suggests that following a transgression, organizations might benefit from implementing disciplinary action to help define organizational boundaries and communicate what is right from wrong.
CHAPTER NINE

Implicit Trust: Erosion and Repair

The previous Chapters tested the role of substantive responses in ‘repairing’ employee trust beliefs and intentions in supervisors following an integrity-based violation. This was achieved through the use of questionnaire responses to hypothetical or actual (historical) events, and through interview discussions. Using these methods it was possible to draw a number of conclusions about ‘explicit trust’. However, studies have shown that trust also comprises an implicit component that captures trust beliefs indirectly. The aim of this Chapter is to offer an exploratory insight into how implicit trust is affected by real-time events that signal an integrity-based violation, and how (and indeed if) trust at this level may be repaired by the actions that follow. It achieves this by measuring trainee nurses’ implicit trust towards different occupational groups prior to a work placement and compares these with their implicit trust following the work placement. The Chapter begins with a short introduction detailing the importance of measuring implicit trust. It progresses to discuss the study that was carried out and the implications of the findings that emerged.

9.1 Introduction

Within organizational research trust is often measured with a survey instrument, whereby employees are required to consider and state how much they trust a particular target (Ball, Trevino & Sims, 1994; Cook & Wall, 1980; Mayer & Davis, 1999; McAllister, 1995; Mayer & Gavin, 2005). These methods are effective at capturing a snapshot of the current state of trust within an organization and may identify dimensions, or areas of organizational functioning, in which employees hold less positive trust beliefs or intentions. They are also effective for identifying the
relative effects of different events on employees’ trust attitudes and the likely impact this may have on behaviour. Their use in previous trust repair studies, and the studies detailed in this thesis, demonstrates this.

Methods that require individuals to rate their trust in another on some measure or verbally through an interview represent ‘explicit’ measures of trust. Explicit trust provides an indication of a person’s conscious evaluation of an attitude-object (e.g., a supervisor). Existing in parallel to explicit trust is implicit trust. This reflects a pre-conscious association between an attitude-object and trust (Burns & Conchie, 2011). Compared to explicit trust, these latter measures offer a less biased measure of trust. For example, explicit trust measures may lead to response biases which overestimate trust as individuals are likely to respond in a socially desirable way or even manipulate their responses to convey that they are trusting individuals (Burns, Mearns, & McGeorge, 2006; Burns & Conchie, 2011). Implicit measures are unlikely to be affected by response biases, which result from an individual’s conscious evaluation of an attitude, as they rely on the automatic activation of attitudes. They look at the time it takes for the presentation of an attitude object (e.g., doctor) to automatically activate an associated evaluation in memory (e.g., trust or distrust). Fast reaction times represent automatic attitude activation, whereas slower reaction times represent a lack of automatic attitude activation (Burns et al., 2006).

Burns and colleagues (2006) were among the first to measure implicit trust and show that it exists as a distinct entity to explicit trust. Adapting the Bona Fide Pipeline technique (Fazio, Jackson, Dunton & Williams, 1995), they measured employees’ implicit trust towards multiple occupational groups and showed that implicit and explicit trust towards the same target (occupational group) was different.
and distinct. For example, employees expressed high explicit trust in workmates, supervisors and senior management, although they only had implicit trust in workmates. In accordance with theories of social identity (Tajfel & Turner, 1986) and self-categorisation (Turner, 1985), Burns et al. (2006) suggested workmates are perceived as part of the same social group, which creates positive perceptions regarding their trustworthiness in comparison to out-group members (i.e., supervisors and senior management). Importantly, these findings suggest that employees’ explicit trust beliefs were more susceptible to response biases, which lead to an overestimation of trust in senior management.

Although explicit trust may be prone to response bias, research generally accepts it as a reliable indication of how a person may act in planned situations. Fazio and Olson (2003) illustrate this point through the use of their Motivation and Opportunity as DEterminants of the attitude-behavior relation (MODE) model. According to this model, implicit measures predict spontaneous behaviours as there is reduced opportunity and motivation to deliberate therefore behaviour is a function of an automatically activated attitude. On the other hand, explicit measures are predictive of deliberate behaviours as these measures are influenced by high opportunity and motivational forces. When put into context, implicit trust could lead to spontaneous behaviours such as speaking up and challenging unsafe acts at the point of their occurrence. On the other hand, explicit trust may lead to the deliberate reporting of an unsafe act (Burns et al., 2006). As a result, high levels of implicit and explicit trust are needed across organizations.

It is unclear how implicit trust is affected by events that signal an integrity-based violation, and how these are subsequently affected by different repair strategies, as there is no empirical research, to date, which has explored this issue.
Research is starting to emerge that has implications for this area. Hasulhun and Schweitzer (2010), for example, examined the effects on trust repair from an individual’s implicit beliefs concerning whether or not personality characteristics are fixed or malleable. They found that apologies are more effective at repairing trust when individuals held incremental implicit beliefs and believed that moral behaviour is malleable. When individuals held entity implicit beliefs and believed moral behaviour is fixed, an apology was less effective. Where this study differs from the one considered in this Chapter, is that it did not look at the effects of apology on implicit trust, but how the relationship between apology and explicit trust is affected by implicit beliefs regarding personality traits.

Interestingly research has suggested that explicit beliefs may be easier to repair than implicit beliefs (Gregg, Seibt & Banaji, 2006; Petty, Tormala, Brinol, & Jarvis, 2006; Rydell & McConnell, 2006). For example, Gregg et al. (2006) presented participants with information about two different hypothetical groups. For one group, the information was positive and for the other group the information was negative. Participants then completed implicit and explicit evaluations about these groups before being told by the experimenter that there was a mix up, such that the information they had been given about the groups were actually the wrong way around. They were then asked to imagine a reversal of the information and to complete their implicit and explicit evaluations again. Gregg et al. found a reversal in evaluations on the explicit measure but no change to the implicit measures. Studies such as this suggest higher stability of implicit beliefs than explicit beliefs.

The aim of the current study was to contribute to existing knowledge by showing the effects of real-time trust violations on implicit trust (and showing how
this compares to explicit trust). Also, to examine how implicit (and explicit) trust is affected by different responses to a real-time trust violation.

9.2 Method

9.2.1 Participants and procedure

Participants were 25 first year nursing undergraduate students who were recruited from a single UK University. Twenty-two participants were female and three were male, which is representative of the nursing population. Participants had a mean age of 24.12 years (SD = 6.39; Range 18 to 39 years). Prior to the study, the participants had no experience of working on a hospital ward as a student nurse. This was important in order to ensure that any reported changes in trust were minimally influenced by transference effects from previous work experiences.

Participants were approached, with the help of the programme co-ordinator at the University from which recruitment took place, at the end of a lecture. Students were told that a study was being conducted on student nurses’ attitudes towards different occupational groups that they would come in to contact with while on hospital placement. Students were informed that the study would consist of a computer task and short questionnaire, which would take approximately 15-20 minutes to complete. They were informed that this would be conducted prior to their first hospital placement (to provide baseline measures), and again after their placement. Thirty-two students agreed to take part in the study. Participants completed the first stage of testing (baseline) in a private room in their University’s library in their own time. No more than two participants completed the study at a single time. Participants then completed their first hospital placement that lasted for an average of 5 weeks. Following this placement, participants returned to university for a further five weeks of study time. It was during the first two weeks of this study
time that participants were contacted and asked to take part in the study for a second time. Of the original 32 participants who took part in the first stage of testing, 25 participants completed the second round of testing. This was done in the same location and under the same conditions as the baseline testing stage. Data from these 25 participants were used in the main analysis. All participants were paid £5 for each time they completed the study. The order in which participants completed the computer task and the questionnaire was counterbalanced to control for any ordering effects.

9.2.2 Computer task

The computerized task was taken from Burns et al. (2006) and tailored to fit the context of the current study. The task required participants to complete three phases: a baseline phase, a priming phase, and a memory test. The baseline phase collected information on how quickly participants associated certain words with trust and distrust; the priming phase looked to see how quickly participants associated certain words with trust and distrust when preceded by primes (i.e., occupational group), and the memory test assessed whether participants were paying attention to these primes. Each phase was completed on a laptop using Super Lab software, version 4.5. Stimuli (i.e., words) were presented in the centre of the laptop screen in regular Times New Roman 45 point font. Responses to the stimuli were made on a four-button response pad which had keys labelled ‘Trust’, ‘Distrust’, ‘Yes’ and ‘No’.

In the baseline phase, participants were presented with a number of target words found to be indicative of trust or distrust, such as ‘liar’ ‘dishonest’ and ‘reliable’ (Burns et al., 2006). Participants responded to the words by pressing either the ‘trust’ or ‘distrust’ key on the response pad to indicate whether they thought the word was indicative of trust or distrust. Two blocks of ten target words were
presented in this phase: ten words were related to trust and ten to distrust. The time taken from presentation of the target word to response pressed was recorded in milliseconds. Participants completed a practice trial block before the real experiment began. This was to increase familiarity amongst participants and ensure they fully understood what was required of them in this part of the task.

In the priming phase, participants were again presented with the trust and distrust words; however, the presentation of each was immediately preceded by the presentation of the name of an occupational group. Participants were instructed to judge the meaning of the target words, as done in the baseline phase, but were also instructed to remember the occupational group for a subsequent memory test.

Five occupational groups were selected for the current study. These were ‘Matron,’ ‘Ward Manager,’ ‘Doctor,’ ‘Senior Nurse’ and ‘Staff Nurse.’ While supervisors (i.e., senior nurses) were the prime focus of the study, other groups were also analysed as a comparison point. Furthermore, a student nurse is likely to interact with all of these occupations whilst on placement. The occupational group prime was presented to participants for 315 milliseconds (ms), there was then an interval of 135 ms before the target (trust/distrust) word was shown. Participants responded to the target word by indicating on the response pad if they believed the word was indicative of trust or distrust. The time taken to respond to the presentation of the target word was recorded in milliseconds. If participants failed to press a response key, after 1750 ms, the next word appeared. An automatic association between the occupational group and trust/distrust is apparent when participants classify the trust/distrust target words quicker when paired with an occupational group, than when no occupational group is used (i.e., the baseline phase).
Ten blocks of trials were presented to participants with an interval of 2.50 seconds separating each trial. In each of the ten blocks, there were 10 randomised trials whereby each of the 5 occupational groups primes appeared twice, followed by 1 of the 20 trust/distrust target words. In order for each of the 20 target words to follow each prime in a structured way, a random selection of 10 trust words were used with 10 distrust words in each trial. This created 10 pairs of target words, which appeared with each prime, but did not appear more than once per block (see Table 9.1). Structuring the words in this way allowed a more valid measure of implicit trust and distrust (Burns & Conchie, 2011). Prior to the priming phase, participants completed a practice block in which different primes and targets were used (Appendix F). In contrast to Burns’ study five primes/occupational groups were used instead of ten to eliminate fatigue amongst participants and reduce the number of errors. Additionally, primes and target words were presented across 10 blocks as opposed to 5. Ten trials were used as other studies have demonstrated that too few trials can result in inadequate and unstable estimates of implicit attitudes (Bosson, Swann & Pennebaker, 2000).

In the final memory test phase, the five occupational group/primes presented in the priming phase were presented again. Participants were required to state whether or not they had seen the prime during the previous phase and press ‘Yes’ on the response pad if they had, and ‘No’ if they had not. In addition to the five occupational groups used in the priming phase, participants were presented with five new occupational groups that acted as filler items. These were used to ensure that participants had been paying attention to the primes in the main task. This was important as it is necessary to activate the associated trust related attitude (Burns et al., 2006). The filler items related to ‘Surgeon,’ ‘Colleague,’ ‘Healthcare Assistant,’
‘Consultant’ and ‘Sister.’ Filler items and primes were presented on the screen for a maximum of five seconds or until participants pressed a key. All responses were recorded.

9.2.3 Questionnaire measures

Explicit trust was measured through the use of questionnaire items. Participants rated their trust beliefs, trust intentions and direct trust in the five occupational groups used as primes in the computerised task; Matrons, Ward Managers, Doctors, Senior Nurses and Staff Nurses.

Trust Beliefs and Intentions. Trust beliefs and intentions towards each occupational group were measured using single items taken from Mayer and Davis’ (1999) Trust Beliefs and Trust Intentions Scale. The item ‘X’s (Occupational Group) are capable of performing their job’ was used to measure ability beliefs and the item ‘X’s are honest’ was used to measure integrity beliefs. Trust Intentions were measured using the item ‘I would be comfortable having X’s make a decision that critically affects me.’ A single item was chosen for each measure to reduce the potential for fatigue and boredom. The items chosen to tap each measure were the ones most highly correlated with each scale in previous Chapters when compared other items. Responses were made on a seven point Likert Scale ranging from Very strongly Disagree (1) to Very Strongly Agree (7).
Table 9.1: Primes and pairs of target words used in the priming phase (adapted from Burns et al., 2006)

<table>
<thead>
<tr>
<th>Prime</th>
<th>Block</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matron</td>
<td>Caring Honest Loyal Dependable Confide Honour Reliable Truthful Count on Be sure of</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Liar Dishonest Backstabber Unreliable Two faced Double Dealing Deceitful Sly Devious</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>Honest Loyal Dependable Confide Caring Reliable Truthful Be sure of Honour Count on</td>
</tr>
<tr>
<td></td>
<td>Liar Dishonest Backstabber Unreliable Traitor Double dealing Deceitful Devious Two faced Sly</td>
</tr>
<tr>
<td>Doctor</td>
<td>Loyal Dependable Confide Caring Honest Truthful Be sure of Count on Reliable Honour</td>
</tr>
<tr>
<td></td>
<td>Dishonest Backstabber Unreliable Traitor Liar Deceitful Devious Sly Double Dealing Two faced</td>
</tr>
<tr>
<td>Senior Nurse</td>
<td>Dependable Truthful Honour Count on Be sure of Honest Loyal Caring Confide Reliable</td>
</tr>
<tr>
<td></td>
<td>Backstabber Deceitful Two-faced Sly Devious Liar Dishonest Traitor Unreliable Double Dealing</td>
</tr>
<tr>
<td></td>
<td>Confide Honour Reliable Honest Count on Loyal Caring Dependable Be sure of Truthful</td>
</tr>
<tr>
<td></td>
<td>Unreliable Two-faced Double dealing Liar Sly Dishonest Traitor Backstabber Devious Deceitful</td>
</tr>
</tbody>
</table>
Direct Trust. Direct trust referred to how much trust participants have in the occupational groups and was measured with a single item ‘I trust X (e.g. Doctors).’

Trust violation. When participants completed the explicit measure for the second time they were also asked to state whether any of the five occupational groups had acted in a way that signalled a lack of integrity during their five week placement. Participants were required to tick a box to state which of the five occupational groups had acted dishonestly; selfishly; appeared sly or devious; two-faced; had poor principles; or acted in a way which made them question their integrity, but which was not captured in the list above (they were given room to state what this behaviour was). The specific examples that were used in the list reflected integrity violations (Ferrin, Kim, Cooper, & Dirks, 2007; Kim et al., 2004; Terwel, Harinck, Ellemers, & Daamen, 2009), and helped clarify the meaning of integrity to participants whilst also providing prompts as to what example acts might be.

Frequency. If participants stated that any of the five occupational groups had acted in any way to signal a lack of integrity, they were asked to indicate whether it was an isolated event or to state on how many occasions this event occurred.

Risk. Participants were asked to state if the integrity violation resulted in patient safety being affected. Participants ticked one of the two given responses; yes or no. As per the study in Chapter 5, this was used to signify whether the violation was high or low risk.

Response. For those participants who reported a violation, they were asked to indicate how the target role responded (e.g., with an apology, no response, etc.). They also indicated whether the employing hospital had responded to the act and if so, details of their response were given.
Finally participants expressed whether any of the occupational groups had shown a lack of competence and answered the same questions that are described above. Although the study was primarily interested in integrity violations, participants’ trust may have reduced while on placement due to a competence-based violation, and so it was important to be able to control for this possibility. Asking this question made this possible.

9.3 Results

9.3.1 Implicit trust

In order to establish whether participants’ held implicit trust in each occupational group, recognition scores were calculated using a method adopted by Fazio et al. (1995). Recognition scores were used to ensure that participants had been paying attention in the priming task, and more specifically, to the five primes/occupational groups that had been presented. This was needed to ensure implicit trust associations were activated. Scores were calculated by subtracting the number of filler items that were incorrectly identified as a prime from the number of primes that were correctly identified. A perfect recognition score would be a score of 1 and performance by chance would be a score of 0. A one sample t-test showed that participants performance was significantly greater than chance both pre-placement ($M = .92, SD = .16; t_{24} = 32.58, p < 0.001, d = 11.70$) and post-placement ($M = .90, SD = .16; t_{24} = 27.47, p < 0.001, d = 11.21$). This shows that participants were paying attention to the primes and the associated trust related attitudes were activated.

Implicit trust scores for each of the five primes were calculated using the method used by Fazio et al. (1995). Facilitation scores assess the extent to which the primes facilitate responses to the trust target words and are indicators of implicit trust. In the baseline phase each target word appeared twice, the average score of
these two words was firstly calculated in order to identify the baseline latency associated with a particular word. In the priming phase, the latency for a target word when preceded by a prime was calculated and this was subtracted from the baseline latency for that particular (trust/distrust) word to calculate the facilitation score. For each of the five primes, mean facilitation scores for the ten trust target words were determined\textsuperscript{15}. A positive mean trust facilitation score suggests the prime is implicitly associated with trust as the latencies for a trust target word when preceded by a prime was quicker than when no prime was used (as in the baseline phase). A negative mean trust facilitation score suggests there is no association between the prime and trust, as the latency for the target word when not proceeded by a prime is faster than when it is preceded by a prime.

The results showed that participants held implicit trust towards each of the five occupational groups pre and post placement (see Figure 9.1). The strength of participants’ implicit trust was calculated using a one sample $t$-test in order to identify whether each primes facilitation score was significantly different from a facilitation score of zero (baseline latency). It was found that participants implicit trust was significantly greater than zero for the each of the five primes pre and post placement (Matron: pre placement: $t_{24} = 5.19$, $p < 0.001$, $d = 2.12$, post placement: $t_{24} = 4.06$, $p < 0.001$, $d = 1.66$; Ward manager: pre placement: $t_{24} = 4.28$, $p < 0.001$, $d = 1.75$, post placement: $t_{24} = 2.95$, $p < 0.01$, $d = 1.20$; Staff nurse: pre placement: $t_{24} = 3.69$, $p < 0.001$, $d = 1.51$; post placement: $t_{24} = 4.34$, $p < 0.001$, $d = 1.77$; Senior nurse: pre placement: $t_{24} = 4.49$, $p < 0.001$, $d = 1.83$; post placement: $t_{24} =$

\textsuperscript{15} Trials in which participants made an error or failed to respond (mean of 3.37% trials per person) were not included in these calculations.
Figure 9.1. Mean Trust Facilitation Scores Pre and Post Placement. Error bars represent ± 1 standard error

2.95, \( p < 0.01, d = 1.20 \); Doctors: pre placement: \( t_{24} = 3.32, p < 0.001, d = 1.36 \); post placement: \( t_{24} = 2.58, p < 0.05, d = 1.05 \).

Paired sample t-tests were carried out to identify if participants trust in any of the occupational groups changed after placement. Participants implicit trust in matrons (\( t_{24} = 1.73, p < 0.05, d = .44 \)) and senior nurses significantly reduced post placement (\( t_{24} = 1.78, p < 0.05, d = .44 \)). No significant differences were found in their implicit trust towards doctors, ward managers or staff nurses post placement. No significant differences were found between groups pre and post placement; participants did not trust one occupational group more than another.

9.3.2 Explicit trust

Table 9.2 shows the mean levels of trust beliefs, trust intentions and direct trust held in each of the five occupational groups before and after placement. The results show that participants’ explicit trust reduced in all of the occupational groups following placement. Overall participants’ expressed the greatest trust in doctors and
senior nurses prior to placement and the least trust in ward managers. Following placement participants still expressed the greatest trust for doctors, but the least trust in staff nurses. However, these differences were not significant (\( p > 0.05 \)). In order to identify whether there had been any significant reductions in explicit trust following placement, paired sample t-tests were carried out. The results show a reduction in employees’ trust beliefs, trust intentions and direct trust in senior nurses following placement (ability: \( t_{24} = 2.33, p < 0.05, d = .54 \); integrity: \( t_{24} = 2.18, p < 0.05, d = .52 \); intentions: \( t_{24} = 2.32, p < 0.05, d = .45 \); direct trust: \( t_{24} = 2.42, p < 0.05, d = .45 \)). Participants also reported reduced trust beliefs in staff nurses following placement (ability: \( t_{24} = 2.19, p < 0.05, d = .60 \); integrity: \( t_{24} = 2.22, p < 0.05, d = .62 \)). No significant changes occurred in participants’ explicit trust in doctors, ward managers or matrons (\( ps > 0.05 \)).

9.3.3 Dual attitudes

The results show differences in the levels of explicit trust as expressed in questionnaire items and implicit trust facilitation scores, post-placement. A correlation analysis between both measures was carried out to establish if dual attitudes could exist (e.g., participants can express high explicit trust and low implicit trust in the same target). The results showed that in most cases, participants’ implicit trust in a target is not correlated with their explicit trust in the target. This emerged at both the pre-placement phase, and the post placement phase (see Tables 9.3 and 9.4). One exception was trust intentions in a Senior Nurse. A significant positive correlation was found between implicit trust and explicit trust intentions, post-placement. This could be related to the high occurrence of violations within this senior occupational group. Consequently, reduced and similar levels of implicit trust and a willingness to rely on senior nurses may have been reported.
Table 9.2 Means and standard deviations for outcome measures pre and post-placement

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Placement</th>
<th>Ability Beliefs</th>
<th>Integrity Beliefs</th>
<th>Trust Intentions</th>
<th>Direct Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Doctor</td>
<td>Pre</td>
<td>5.88</td>
<td>0.75</td>
<td>5.47</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.52</td>
<td>1.42</td>
<td>5.11</td>
<td>1.44</td>
</tr>
<tr>
<td>Matron</td>
<td>Pre</td>
<td>5.81</td>
<td>0.78</td>
<td>5.59</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.28</td>
<td>1.40</td>
<td>5.33</td>
<td>1.49</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Pre</td>
<td>5.50</td>
<td>0.76</td>
<td>5.22</td>
<td>0.79</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.12</td>
<td>1.36</td>
<td>4.88</td>
<td>1.48</td>
</tr>
<tr>
<td>Senior Nurse</td>
<td>Pre</td>
<td>5.91</td>
<td>0.73</td>
<td>5.56</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.21</td>
<td>1.56</td>
<td>4.88</td>
<td>1.51</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>Pre</td>
<td>5.81</td>
<td>0.78</td>
<td>5.53</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>5.00</td>
<td>1.66</td>
<td>4.76</td>
<td>1.45</td>
</tr>
</tbody>
</table>
Table 9.3 Correlations between explicit and implicit trust beliefs pre placement

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>Explicit Ability Beliefs</th>
<th>Explicit Integrity Beliefs</th>
<th>Explicit Trust Intentions</th>
<th>Explicit Direct Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor Implicit Trust</td>
<td>.09</td>
<td>.34</td>
<td>.14</td>
<td>.32</td>
</tr>
<tr>
<td>Matron Implicit Trust</td>
<td>.16</td>
<td>.10</td>
<td>-.02</td>
<td>.24</td>
</tr>
<tr>
<td>Ward Manager Implicit Trust</td>
<td>.16</td>
<td>.32</td>
<td>.18</td>
<td>.31</td>
</tr>
<tr>
<td>Senior Nurse Implicit Trust</td>
<td>.21</td>
<td>.27</td>
<td>-.06</td>
<td>.21</td>
</tr>
<tr>
<td>Staff Nurse Implicit Trust</td>
<td>.15</td>
<td>.21</td>
<td>-.05</td>
<td>-.04</td>
</tr>
</tbody>
</table>

Table 9.4 Correlations between explicit and implicit trust beliefs post placement

<table>
<thead>
<tr>
<th>Occupational group</th>
<th>Explicit Ability Beliefs</th>
<th>Explicit Integrity Beliefs</th>
<th>Explicit Trust Intentions</th>
<th>Explicit Direct Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor Implicit Trust</td>
<td>.01</td>
<td>-.09</td>
<td>.11</td>
<td>.07</td>
</tr>
<tr>
<td>Matron Implicit Trust</td>
<td>-.14</td>
<td>-.13</td>
<td>-.34</td>
<td>-.14</td>
</tr>
<tr>
<td>Ward Manager Implicit Trust</td>
<td>-.16</td>
<td>-.07</td>
<td>.01</td>
<td>-.19</td>
</tr>
<tr>
<td>Senior Nurse Implicit Trust</td>
<td>.04</td>
<td>-.27</td>
<td>-.48*</td>
<td>-.27</td>
</tr>
<tr>
<td>Staff Nurse Implicit Trust</td>
<td>-.23</td>
<td>-.29</td>
<td>-.28</td>
<td>-.30</td>
</tr>
</tbody>
</table>

*p < 0.05, **p <0.01, ***p < 0.001.
9.3.4 Violations

Sixteen participants reported that an integrity-based violation had occurred by at least one occupational group during their placement. Within this subsample, a total of 38 violations across occupational groups were reported (see Table 9.5). The violations reflected acting dishonestly \( (n = 11) \), acting selfishly \( (n = 7) \), acting sly or devious \( (n = 7) \), being two-faced \( (n = 9) \), and displaying poor principles \( (n = 4) \). All of these specific acts were combined together to reflect a single category of integrity-based violations, as the sample size was too small to look at the effects of each of the acts on trust and subsequent responses separately.

Table 9.5 also shows that from the 38 violations, 6 non-substantive responses were employed, 5 of which were apologies and 1 was a justification (a response implemented by a senior nurse). Additionally, five substantive responses were employed by the hospital, 2 involved the removal of the person from administering medication, 1 involved training (both of which were implemented for staff nurses), and 2 individuals were monitored (one senior nurse and one staff nurse). All of these substantive responses were implemented by hospital management. No violations were followed by a combination of both a non-substantive and a substantive response.

For comparison, Table 9.6 shows the same information but as it relates to competence-based violations. Sixteen competence-based violations were reported; fewer than reported integrity-based violations. In regards to the responses employed, 4 apologies were used by senior nurses and staff nurses, 1 staff nurse blamed someone else, and 1 senior nurse justified her actions. Further, 3 substantive responses were employed: 2 staff nurses were given training and one was put under supervision. One violation also included the combination of an apology and training.
Table 9.5: Information concerning the number of integrity-based violations which occurred during placements

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Integrity-Based Violation</th>
<th>One-off Event</th>
<th>Frequent Event</th>
<th>Low-Risk</th>
<th>High-Risk</th>
<th>Non-Substantive Response Employed</th>
<th>Substantive Response Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Matron</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Senior Nurse</td>
<td>13</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 9.6: Information concerning the number of competence-based violations which occurred during placements

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Competence-Based Violation</th>
<th>One-off Event</th>
<th>Frequent Event</th>
<th>Low-Risk</th>
<th>High-Risk</th>
<th>Non-Substantive Response Employed</th>
<th>Substantive Response Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Matron</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Senior Nurse</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Staff Nurse</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
In order to establish whether the significant reduction in participants’ implicit and explicit trust in matrons, senior nurses and staff nurses could be attributed to an integrity-based violation rather than a competence-based violation, mixed model ANOVA’s were conducted\(^\text{16}\). Whether or not participants had experienced an integrity-based violation, and a competence-based violation was included in the model as the independent factors on which trust was regressed. One model was tested for each of the trust measures on which a reduction had occurred. For senior nurses this resulted in analysis for trust beliefs, trust intentions, direct trust and implicit trust; for matrons it was implicit trust, and staff nurses it was ability beliefs and integrity beliefs. The repeated factor in the ANOVA was participants’ implicit trust/explicit trust before and after placement.

The results of the mixed ANOVA showed no main effect of an integrity-based violation on implicit trust towards Matrons. The level of implicit trust expressed by those experiencing an integrity-based violation \((M = 70.76, SD = 65.08)\) was not significantly different from those who had not experienced a violation \((M = 84.64, SD = 89.58)\). Inspection of participant responses showed that no participants reported experience of a competence-based violation by a Matron, thus suggesting that the reduction in implicit trust towards Matrons is due to other factors. In contrast, a main effect of an integrity-based violation was found on implicit trust towards a senior nurse, \(F_{1, 23} = 4.30, p < .05, \eta^2 = 0.14\). Those who experienced an integrity-based violation by a senior nurse reported significantly lower levels of implicit trust in senior nurses \((M = 27.43, SD = 127.89)\) than those

\(^\text{16}\) Assumptions of ANOVA are the sample size must be greater than 10 plus the number of dependent variables, further each condition must have more than 5 cases (Tabachnick & Fidell, 2001). As there were 25 participants in the sample used in this study, and the smallest number of people in each condition was 5, these assumptions were met. In addition to this, homogeneity of variance was assumed (\(p_s > 0.05\)).
who had not following placement ($M = 73.73, SD = 97.57$) (See Figure 9.1). For those participants who had experienced an integrity-based violation, risk or frequency of event was found to have no significant effect on participants reported changes to implicit trust ($ps > 0.05$). No significant main effects were found for competence-based violations, or were any interactions found between violation type and implicit trust ($ps > 0.05$).

The results in Section 9.3.2 showed that participants’ explicit ability beliefs, integrity beliefs, trust intentions and direct trust in a senior nurse were significantly lower following placement. A mixed ANOVA showed a significant main effect for an integrity-based violation on participants’ integrity beliefs; $F_{1, 23} = 11.72, p < .01, \eta^2 = 0.51$: those who experienced an integrity-based violation showed a significant reduction in trust, whilst those who did not report an integrity-based violation did not (see Figure 9.2). A main effect for an integrity-based violation was also found for direct trust, in that participants’ direct trust in senior nurses was significantly lower post placement for those who experienced an integrity-based violation ($M = 4.62, SD = 1.71$) than those who had not ($M = 5.53, SD = 1.25; F_{1, 23} = 9.11, p < .01, \eta^2 = 0.40$) (see Figure 9.3). Level of risk and frequency of the integrity-based violation had no significant effect on integrity beliefs or direct trust ($ps > 0.05$). No main effect was found for competence-based violations on participants’ integrity beliefs or direct trust, or did any significant interactions emerge between violation type ($ps > 0.05$).

In regards to ability beliefs and trust intentions, no significant differences were found for those who experienced an integrity-based or competence-based violation than those who had not ($ps > 0.05$). Section 9.3.2 showed that explicit trust beliefs in staff nurses significantly reduced after placement. A mixed ANOVA
Figure 9.2: Levels of implicit trust in a senior nurse pre- and post-placement in violation and no violation groups.

revealed that these differences were not dependent upon whether the participant had experienced an integrity-based violation ($p > 0.05$) or competence-based violation ($p > 0.05$).

9.3.5 Response Strategies

Analysis was carried out to identify if integrity-based violations that were followed by a (non)substantive response resulted in higher trust than those followed by no response. Data were analysed as one group, rather than per occupational target, as the number of response strategies that were implemented per occupation was relatively small. To control for the fact that different occupational groups were captured in the sample, occupational group was included in the model as a covariate. Data were analyzed using a mixed model. The independent variable was whether or not a response strategy was employed, and if this was substantive in nature or non-substantive. The dependent variable was the implicit/explicit trust in the
occupational group who showed the lack of integrity. The results showed a main effect for response on the explicit measure of ability beliefs, \( b = 0.41, SE = 0.16, t = 2.03, p < 0.05 \), such that a response to the event resulted in higher ability beliefs (\( M = 5.04, SE = 0.09 \)) than no response (\( M = 4.43, SE = 0.09 \)). Similarly, higher explicit trust intentions were reported following a response (\( M = 4.89, SE = 0.08 \)) than no response (\( M = 5.22, SE = 0.08; b = 0.35, SE = 0.20, t = 1.96, p < 0.05 \)). No significance differences were found on the outcome measures of integrity beliefs, direct trust or implicit trust (\( p > 0.05 \)). Occupational group was also not identified as a significant predictor in the model (\( p > 0.05 \)).

Data were analyzed further to see if cases in which a substantive response was employed lead to greater implicit and explicit trust than cases in which a non-substantive response was employed. No main effect or interactions were found, a substantive response did not lead to greater implicit or explicit trust than a non-substantive response (\( p > 0.05 \)).

**9.4 Discussion**

The aim of this Chapter was to explore trust reduction and repair following a real-time trust violation. It also sought to discover whether a non-substantive or substantive response could effectively repair implicit trust, as previous chapters have shown them to be effective in the repair of explicit trust. The study found that integrity-based trust violations are common amongst senior nurses, matrons and staff nurses, and that these reduce the level of implicit, and in some cases explicit trust held towards them. The effects of integrity-based violations were stronger than competence-based violations, and preliminary results showed that a response
Figure 9.3: Levels of integrity beliefs in a senior nurse pre and post placement in violation and no violation groups.

Figure 9.4: Levels of direct trust in a senior nurse pre and post placement in violation and no violation groups.
following an integrity-based violation helped to preserve some trust. However, the nature of this response (substantive or non-substantive) appeared to have no differential effect: both were more effective than no response. These effects emerged irrespective of the level of risk implicated in the event, and the frequency that such events occurred.

The results showed that participants’ implicit and explicit trust significantly reduced in Senior Nurses following an integrity-based violation. Trust is likely to reduce in a senior nurse as they act as mentors to students during placements, based on their nursing experience and knowledge. This is likely to create positive expectations regarding their job role, as they are expected to lead by example (Frankel, 2008). A demonstration of a lack of integrity would challenge these positive expectations and ultimately reduce trust (Kim et al., 2004). Indirect support for this comes from research that shows that when a senior nurse does not fulfil their mentoring role (e.g., by focusing on their own work as opposed to a student nurses’ learning), those being mentored develop negative perceptions towards the senior nurse (McGowan, 2006). Interestingly, the effects of low integrity did not generalise to effecting beliefs regarding the senior nurses’ ability or student nurses’ intentions to rely on the senior nurse. The pattern of results concerning ability beliefs is similar to that of earlier chapters which have shown that ability beliefs are less likely to be affected following an integrity-based violation, as the individual’s competence is not being called into question. Furthermore, post-placement scores in trust intentions may have simply reduced because they are now based on actual experience, rather than on assumed stereotypes which may lead to initially inflated willingness to rely on senior nurses (Kramer, Leonardelli & Livingston, 2011).
A reduction in implicit trust towards Matrons, and explicit trust in Staff Nurses following placement were unrelated to the occurrence of an integrity-based violation, or a competence-based violation. In such cases it is not clear what led to the reduction of trust. However, as with the results reported above, it may simply reflect the fact that reports have shifted from stereotypes of these targets to actual experiences with these targets (e.g., from trait trust to specific trust). Alternatively, a lack of interaction with matrons may have provided limited opportunity to validate pre-existing trust beliefs. Similarly, staff nurses may have demonstrated behaviours that are not captured by integrity, but which reduced trust. For example, they may have showed a lack of benevolence, which is another factor that can reduce trust (Mayer, Davis & Schoorman, 1995).

Interestingly, it was only in senior nurses that a reduction in implicit beliefs post-placement, coincided with a reduction in explicit trust beliefs, trust intentions and direct trust explicit beliefs. A reduction in implicit beliefs in matrons did not coincide with explicit reductions. Further, explicit reductions in staff nurses did not coincide with reduced implicit trust. This may be because explicit measures depend on a person’s willingness and ability to introspect (Houben & Wiers, 2009). It may have been easier for students to reflect on events involving a senior nurse if the student worked closely with them in a mentoring role. It would also be relatively easy to reflect on incidents involving staff nurses, as there are usually a high number of staff nurses present on a hospital ward. If participants are frequently interacting with these groups, the chances of a violation occurring is greater than in those groups who participants do not interact with. Evidence for this suggestion comes from the finding that participants reported the highest number of violations from senior nurses and staff nurses in comparison to other groups. Importantly, the results also suggest
that implicit and explicit attitudes can be detached, which is consistent with the results of other studies (Dovidio & Fazio, 1992; Fazio, 1990).

The results looked to see if substantive responses lead to greater trust repair than non-substantive responses, however no such effects were found. This may be because there were only a small number of cases reporting the implementation of a non-substantive and substantive response, therefore any differences in effects may have been too small to detect. The results did show however, that explicit measures of ability beliefs and trust intentions were significantly higher following the implementation of a trust response per se. No such effect was found for implicit trust, integrity beliefs or direct trust. This may be because the trust responses employed may have been seen to target these elements of trust. For example, the results of Chapter 6 suggest training (one of the substantive responses employed in the current study) can be effective in predicting ability beliefs. Furthermore, an apology (the most common response employed in the currently study) was shown to positively influence trust intentions in Chapters 4 and 5. The trust responses considered may not have been considered strong enough responses to repair implicit beliefs, which research suggests remain stable irrespective of new information (Gregg et al., 2006).

Conclusion

The study provided some important insights for the trust repair literature. First, it was shown implicit and explicit trust beliefs are largely separate constructs, which can both reduce following the occurrence of an integrity-based violation. As implicit trust beliefs are relatively stable, repair strategies need to be strong and targeted to impact upon participants’ implicit trust. On the other hand, explicit beliefs are affected by participants’ ability to introspect upon events which increases
with frequent interactions and frequent violations. Second, the results shown explicit trust may be repaired with non-substantive and substantive responses such as apologies and training, which are particularly effective at repairing ability beliefs and trust intentions. This study is one of the first to empirically explore trust violations and repair following a real-time trust violation, and at an implicit level. It emphasises the importance of responding to an act that signals an integrity-based violation, as in situations where a response is not given, trust deteriorates more.
CHAPTER TEN

General Discussion

The trust literature has identified that employees’ trust in management is low and reducing (Kim et al., 2004). This has led to growing attention into the ways in which to repair employee trust, and increase the organizational efficiency that this can promote (Fukuyama, 1995). The aim of the current research was to identify the role of non-substantive and substantive responses in the repair of employee trust. First, the research sought to explore trust erosion and repair within high-risk contexts following an integrity-based violation, or transgression. Existing research has predominantly explored trust repair within a general business context and typically following transgressions that carry some direct financial cost (e.g., lost bonus, incorrect filing of reports) (Kim et al. 2004, Kim et al., 2006; Dirks et al., 2011). While these are real events that may signal a violation to employees’ trust expectations, they may not be the most salient events within all contexts. Within industry, for example, trust is often associated with how management respond to safety, and trust may reduce when breaches to safety are observed (Conchie & Donald, 2008). This raises the interesting question of whether a reduction in employee trust in management following these types of events can be restored.

This is an important question for industry, as safety breaches are not always followed by dismissal, especially when the outcome is a near-miss, or if the person is regarded as highly expert and experienced in an area. In such cases, employees may be required to continue to work alongside the member of management and so identifying ways to minimise the reduction in trust, so as to avoid it reaching levels that trigger revenge or retaliation, would be advantageous. Reducing the damage to
trust also provides a better base from which management may continue to work to
re-build employees’ trust through future demonstrations of trustworthiness.

Second, the research sought to discover the relative effectiveness of
substantive trust repair strategies (e.g., responses that constrain the future actions of
an individual), both in absolute terms and when compared to non-substantive repair
strategies (e.g., verbal accounts, such as apology and blame). Non-substantive repair
strategies have been the focus of most research in this area, and some success has
been reported. However, when the outcome of an event is considered severe, or
carrying greater negative consequences for the individual (which, arguably, breaches
to safety do), substantive responses are suggested to be necessary (Janowicz-
Panjaitan & Krishnan, 2008). The types of substantive responses that are most
effective, however, are under-explored.

Finally, the research sought to identify whether the effectiveness of repair
strategies are impacted by a number of situational moderators which have not been
empirically tested. The situational factors of interest in this study were the level of
risk implicated in the transgression, the level of management who have transgressed,
the level of personal involvement in the event and whether the response employed
was voluntarily implemented (i.e. based on the suggestion of the supervisor) or
involuntarily implemented (i.e. based on the suggestion of the organization).

To explore these issues, six empirical studies were carried out across industry
(gas, rail and healthcare). Together the studies provided an insight into the
effectiveness of both non-substantive and substantive repair strategies and allowed
for comparison across industry to see if the effects of these strategies were
widespread across sectors. The results of these studies are summarised below.
Importantly, these studies did not aim to establish ways in which employee trust in
management might be restored to its original level. This would be unwise in any situation due to the possibility that people may seek to deceive others into believing that the event will not be repeated. Trusting in these situations, and following a single response, would make the person particularly vulnerable. It is also unlikely that trust can be restored to its original level with a single response, as trust is known to be easier to break than build (Slovic, 1993) and people do not trust gullibly (Yamagishi, 2001).

**Non-substantive trust repair strategies**

A number of non-substantive responses have been identified as effective strategies to repair employees’ trust in management across different business contexts. This includes apologies (e.g., Kim et al., 2006; Tomlinson et al., 2004), promises (Schweitzer, Hershey & Bradlow, 2006), excuses (Shapiro, 1991), denials (e.g., Kim et al., 2004; Sigal, Hsu, Foodim, & Betman, 1988) and justifications (Coombs, 1999). The current research tested the generalizability of these findings to a risk context. Chapters 4 and 5 showed the relative strength of an apology over a justification in repairing employee trust through the use of vignettes. Chapter 6 extended this by drawing on events in an employee’s history to show that an apology is also more effective than excuses, denials and asking for forgiveness. Similar to work in other areas, the results show that externally attributed responses following a transgression serve to reduce trust further, while apologies lead to higher levels of trust (Ferrin et al., 2007; Gill, Thompson, Febbraro & Barnes, 2010; Lewicki & Bunker, 1996; Ohbuchi, Kameda & Agarie, 1989).

Coombs and Holladay (2002) found that externally attributed non-substantive responses (e.g., denials) are only effective when moderate or no attributions of responsibility lie with an individual. Given the studies reported in this thesis, the
responsibility for the events was typically attributed to the supervisor, with events being described as factual as opposed to hear-say. This was shown through manipulation checks in which the majority of participants believed that the supervisor had the choice not to act in the way described. This would weaken the effects of denials, or as found in this study, serve to reduce trust further.

In order to ensure what was being captured was trust repair and not simply forgiveness, Chapters 4 and 5 included a measure of both to demonstrate their distinct qualities. In support of other research (Enright, Gassin & Wu, 1992; Freedman, 1998), the results of Chapter 4 and 5 showed that trust was largely distinct from forgiveness, in that it was possible to forgive management without trusting them.

**Substantive trust repair strategies: A preventative procedure**

The existing literature concerning the effectiveness of substantive responses is limited and mostly non-empirical (Gillespie & Dietz, 2009; Janowicz-Panjaitan & Krishnan, 2008). This was addressed in the current research through the examination of preventative procedures (a common response to transgressions within industry that address the system in which employees’ operate), and monitoring and suspension (responses directed towards the transgressor and shown to be effective in existing research) (Amarasingham et al., 2009; Bottom et al., 2002; Gillespie & Dietz, 2009; Schweitzer & Ho, 2005). Chapters 4, 5 and 6 showed the effectiveness of a preventative procedure in the repair of employee trust in management following a transgression. However, its role appeared to be qualified by the presence of a non-substantive response.

Chapters 4 and 5 showed that a preventative procedure was effective when combined with an apology, but typically ineffective when considered together with a
justification or in isolation. One implication of this finding is that a preventative procedure has minimal absolute effects on trust repair, and its main role is enhancing the effects of an apology. The fact that a preventative procedure had no main effect on employee trust when considered in isolation, yet an apology did, suggests that the procedure is enhancing the effect of an apology, rather than the reverse. It is also suggested by the fact that a procedure did not reverse the negative effect of a justification on employees’ trust following a transgression. When a procedure is implemented with a justification it may be interpreted as a further indication that the supervisor is not trusted.

The findings relating to a preventative procedure are relatively robust. They were found across industries (gas and healthcare) and when using both hypothetical events (Chapters 4 and 5) and real events (Chapter 6). However, these effects were not found in the rail industry (Chapter 8). An initial interpretation of these findings is that the effect of a preventative procedure on employee trust is different across sectors. This is a plausible explanation, as sectors are known to differ in their safety standards, approaches to safety, and quality of social relations. For example, the gas and healthcare samples used in this thesis reported stronger identification with supervisors than that observed in the rail sample. When identification is high, greater perceptions of trustworthiness are reported (Brewer, 1996) and so a procedure may be accepted as a sufficient response. However, when identification is relatively low, simply implementing a preventative procedure may have little effect.

A second interpretation of this finding is methodological in nature and suggests that differences may have emerged due to earlier Chapters comparing the results of a procedure to a condition in which no procedure was offered. However, in Chapter 8 a voluntary procedure was compared to a condition in which an
involuntary procedure was given. In such cases no main effect may have emerged as an involuntary procedure is just as effective as a voluntary procedure. This claim is supported by the findings of previous chapters (4 and 5) which showed there were no significant differences in the framing of a procedure.

Thirdly, in Chapters 4 through 6, gas and healthcare employees were informed that a procedure had been implemented to prevent a similar event from occurring. The ability of these procedures to prevent a repeat event was clear. In contrast, participants in the rail industry were given specific details about the procedure that was implemented. This was done to increase the ecological validity of the information that participants received. However, in doing this, it introduced the risk that the procedure was not perceived as a preventative measure (in the same way as the simple description presented to gas and healthcare employees). For example, the procedure described the system implemented but did not make it clear that a violation to this system was difficult, or state anything about its ability to prevent future events. Participants may therefore have lacked confidence in the system and as a result dismissed this information when informing beliefs about the supervisors’ trustworthiness. The fact that perceived prevention did not mediate the effects of a procedure on employees’ trust offers some support to this suggestion. If true, these results stress the importance of prevention in trust repair. More simply, employee trust is likely to be higher if they have confidence that the response can prevent similar events. In the absence of this confidence, a procedure implemented in response to a transgression is likely to have minimal effects on social relations. Future research would benefit from exploring this in more detail to identify if the results from the rail industry are reflective of a methodological limitation or a sector difference.
**Situational moderators**

One of the questions of Chapters 4 and 5 was whether the effectiveness of a preventative procedure was moderated by hierarchical status (e.g., whether the transgressor is a supervisor or manager), a person’s involvement in the transgression, and the level of risk implied in the event. In relation to hierarchical status, Janowicz-Panjaitan and Krishnan (2008) proposed that trust repair strategies should vary between supervisors and managers because of the different roles that they play and the greater expectations associated with roles of a higher authority. In accordance with this, it was proposed in the current research that responses perceived to be voluntary and implying ownership for the event (e.g., apology, a preventive procedure requested by the transgressor) would be required when the transgressor was senior management, but not when it was a supervisor. In the case of supervisors, a procedure, regardless of who implemented would be sufficient as the expectations of a supervisor are lower and therefore less effort would be required. The results of the current study offered some support to this suggestion. A voluntary response was necessary to repair trust in a manager following a transgression, whereas the nature of the response (voluntary or involuntary) was not important when the transgressor was a supervisor.

A similar effect was found in relation to personal involvement in the event. The results show that a voluntary preventative procedure is important for trust repair when a transgression implicates an employee. However, when the transgression is attributed solely to the act of the supervisor, a procedure (irrespective of who it is implemented by) is sufficient. This suggests that voluntary acts of trust repair are essential in situations that adversely affect those close to an event, or are directly affected by the event (i.e., an employee). In these situations, a preventative
procedure implemented by the organization or some other source is likely to be ineffective – despite the fact that the procedure itself may be the same as that implemented following the transgressor’s suggestion. The likely reason for this is that a procedure implemented by the organization does not signal personal remorse, or responsibility for the event. Research suggests that when events are considered severe (e.g., performed by senior managers or implicating the employee in the transgression), then these two things are needed. Simply implementing a procedure that does not convey this information will be relatively less effective, as the results in Chapters 4 and 5 suggest.

In relation to the level of risk implied by an event, it was predicted that this would moderate the effectiveness of repair strategies such that substantive responses would be more important when the outcome was severe. Generally, the results showed that integrity-based trust violations that incurred severe outcomes were harder to repair than those that incurred less severe outcomes. The results of Chapters 4 and 5 showed that following a low-risk violation, the non-substantive response of an apology was equally, if not more effective than the substantive response of a preventive procedure being implemented in the repair of employee trust. However, when risk was high, the combination of an apology and a procedure was required to repair trust.

This finding lends empirical support to the proposals that high-risk events require greater reparation than low-risk events (Janowicz-Panjaitan & Krishnan, 2008; Lewicki & Tomlinson, 2003). With less severe events reconciliation increases because the probability of a future violation decreases and so a response (irrespective of its source) generally has a positive impact on trust (Tomlinson et al., 2004). According to Shaprio, Buttner and Barry (1994), a non-substantive response is less
effective when an individual has suffered from severe consequences. However, the combination of both a non-substantive and substantive response can add an elicit level of trust which may be required to repair trust (Bottom et al., 2002). An apology can signal regret and commitment to reform, and based on theories of control (Fishbein & Ajzen, 1975), a procedure can ensure employees that another’s behaviour is perceived as being under control. A procedure is likely to offer more control than an apology as it is more tangible in nature (Farrell & Rabin, 1996).

**Substantive responses: Monitoring and suspension**

Responses that are implemented through the request of the transgressor (referred to as ‘voluntary’ responses in this thesis) are not commonly employed within industry, and research suggests that more gains may be made by identifying effective ‘involuntary’ responses (i.e., those that are implemented by the organization or some other external source) (Desmet et al., 2011). Research has identified a successful role of monitoring in the repair of trust within organizational relationships (Dirks et al., 2011; Nakayachi & Watabe, 2005), and some success with disciplinary actions, namely suspension (Grote, 2001). The effect of these responses on employees trust within industry was considered in Chapters 6 through 8.

The effects of monitoring on employees’ trust were mixed. The results showed that monitoring a supervisor following a transgression was positively related to employee trust when monitoring was the only trust repair response used (Chapters 6 and 7). However, when an apology was also given, the effects of monitoring on employee trust became negative. One explanation of this finding is that an apology changes employees’ interpretation of monitoring, such that they regard it as evidence that the organization does not accept the sincerity of the apology, thus indicating the supervisor is not trustworthy. This may be particularly so when employees have
relatively little experience with a supervisor (such as in Chapters 7 and 8), as employees look to the actions of the organization to provide important diagnostic information about the supervisor, and how much they may be trusted.

The effects of monitoring contrasted with those related to discipline. In Chapter 6, discipline was positively related to employees’ trust in their immediate supervisor. This was replicated in Chapters 7 and 8 where the specific act of suspending a supervisor following an integrity-based transgression had a positive impact on employees’ reported trust in the supervisor. This effect was stable across conditions when an apology was present and absent, and across gas, rail and healthcare sectors. Suspension is different to monitoring in that it involves an element of punishment, usually through removal of some meaningful privilege or benefit (e.g., financial loss, or loss of responsibility or power). This may be one reason why the direct effect of suspension is robust to the effect of other response strategies (e.g., apology) to which it may be paired. Importantly for industry, these results suggest that suspending a supervisor might be one effective way to restore employees’ trust. Further, and despite the prediction of this thesis, the effectiveness of a suspension does not appear to be dependent on the gravity of the outcome of the event. Chapter 7 showed that it was effective in cases when the outcome varied from mild to severe, and Chapter 8 showed that it was effective when no stated outcome was given.

In addition to repairing trust in supervisors, the results showed that substantive responses may impact employees’ trust in the organization. Monitoring and suspension had a direct impact on employees’ trust in the organization. This occurs because these responses are perceived as procedurally fair (i.e., the perceived fairness of the policies and procedures used in decision-making processes (Lind &
Tyler, 1988). The importance of procedural justice in generating trust has been previously demonstrated (Cohen-Charash & Spector, 2001). Procedural justice can reduce employees’ negative attitudes about the fairness of procedures and the policies to which they are exposed (Workman, 2009). These findings have important implications for industry as they suggest much wider consequences for the way that transgressions are responded to. Done correctly, they will restore trust in the transgressor and maintain trust in the organization. Done incorrectly, they may fail to restore trust, or worse, reduce trust further – in both the transgressor and the organization.

**Unpacking substantive responses**

The later studies in the thesis started to explore some of the processes underlying the relationships between trust repair responses and employees’ trust. Research in this area is only just starting to emerge which means that our understanding of how responses operate is still in its infancy. Based on proposals of Equity Theory (Adams, 1965) and Organizational Justice (Greenberg, 1995), it was predicted that monitoring and suspension would help impose justice amongst a transgressor and restore the moral imbalance caused by a violation. Karremans and Van Lange (2004) found that following perceptions of justice, individuals can let go of negative emotions which leads to exoneration. On the other hand, if justice is not perceived employees may seek out the cause of why a response is being implemented and possibly attribute this to information to which they are not privy to. This is likely to lead to perceptions that the organization considers the supervisor untrustworthy.

Just culture models are commonly implemented within risk contexts to decide on the appropriate level of action to be taken following a transgression (Marx,
The focus of these models is not simply to punish a person for a violation but to hold them accountable for their actions so that they can learn from their mistakes. This is particularly important in a risk context in order to mitigate future safety concerns and to ensure the underlying cause of the violation has been addressed. Monitoring often marks the first step in the application of a ‘just culture’ system, which is used in organizations following events that signal a deviation or breach to procedures (Vogelsmeier, Scott-Cawiezell, Miller & Griffith, 2010). Additionally, suspension may also be perceived as a just response to implement following an integrity-based violation as it matches the severity of an integrity-based violation, which research suggests are generally perceived as severe (Olekalns & Smith, 2012). When employees perceive an effective and fair learning tool has been put in place, repentance is generated. The importance of repentance in repairing trust has been previously shown across studies looking at both non-substantive and substantive responses (De Cremer & Schouten, 2008; Dirks et al., 2011; Ohtsubo & Watanbe, 2009; Tomlinson et al., 2004). However, this effect has not been shown with responses that originate externally (i.e., from the organization). This thesis was one of the first to show that involuntary responses can also elicit repentance, so long as they are perceived as just.

Interestingly, risk was found to have an effect on employees’ perceptions of repentance: only when the risk was high did employees perceive supervisors to likely be repentant following the implementation of suspension. Employees may have believed that the supervisor was more likely to learn from suspension when the risk was high as the impact of the supervisor’s actions is more apparent. When the risk is low, the consequences of their actions may not be considered significant enough to shock, or warrant them to change their behaviour.
Are all dimensions of trust affected equally?

A number of dimensions of trust were considered across the studies. These related to beliefs about supervisors’ trustworthiness (based on expectations of their ability and integrity), and employees’ willingness to trust the supervisor (trust intentions). Trust intentions were considered at a general level (i.e., as a willingness to rely on the supervisor) and a specific level (through intentions to voice). In the final study (Chapter 9), the thesis also looked at the effects on implicit trust, which reflects a pre-conscious association between an attitude-object and trust (Burns & Conchie, 2011). The results showed that not all dimensions of trust are affected equally by trust repair responses.

Across the studies, integrity beliefs and trust intentions were the hardest dimensions of trust to repair. This is not unexpected given that the focus was on integrity-based violations, and so efforts to repair dimensions directly impacted by this (i.e., integrity-beliefs) would be most difficult. Indicators of integrity are often argued to be the strongest determinant of trust (Conchie, Taylor & Charlton, 2012), and so it would flow from this that trust intentions would also be strongly affected by these acts. One explanation for why these dimensions are particularly difficult to repair, when compared to ability beliefs for example, comes from the schematic theory of attribution (Reeder & Brewer, 1979). According to this model, a lack of integrity is difficult to ‘repair’ as it is a dimension on which a person can easily deceive. For example, a person with low integrity can show an act of honesty in one situation if there are incentives to do so, but not necessarily maintain this behaviour in another context. As a result, an apology is not often considered a reliable enough indicator that the person will show integrity, therefore greater efforts are required in order to signal sincerity in claims of reform. This was supported empirically across
the studies in this thesis with findings that show integrity beliefs were more likely to be repaired following the implementation of a substantive response combined with an apology, or a substantive response alone.

Trust intentions are likely to require greater reparation as according to Conchie and Burns (2008) trust intentions show a greater resistance to change than trust beliefs. In their study, it was found that when individuals update their trust beliefs about another, they refer to both positive and negative information. However, when they update their trust intentions, they draw upon largely negative information. These results suggest a trust response must be substantive enough to counteract the largely negative information which individuals refer to in order to increase the likelihood of the individual relying on that person in the future.

The results across Chapters showed that generally an apology and a substantive response helped repair trust intentions. An apology helps repair trust intentions as individuals focus more upon the intentions of the supervisor as opposed to their actual behaviour when making a decision on whether to rely on them again (Dirks et al., 2011). Interestingly, however, intentions to voice were minimally affected by a violation. The results across Chapters showed that intentions to voice amongst employees were relatively stable. Employees may have therefore felt a moral obligation to speak up following a violation in order to ensure the safety of other employees and third parties. Similarly, ability beliefs held constant across violations of different levels of risk. This is expected given that the violations were framed as integrity-based and not competence-based.

Another dimension of trust, which appeared to be largely resistant to change, was implicit trust. In Chapter 9 it was found that following an integrity-based violation, implicit and explicit trust reduced. However, the implementation of
responses such as an apology and training only helped to preserve explicit trust, whilst implicit trust was more stable. The results of Chapter 9 suggested that, in support of other research (Gregg, Seibt & Banaji, 2006; Petty, Tormala, Brinol & Jarvis, 2006; Rydell & McConnell, 2006), implicit trust beliefs are relatively fixed in comparison to explicit beliefs, and possibly require stronger action in their repair. On the other hand explicit beliefs are more readily influenced by participants’ ability to introspect upon events (Houben & Wiers, 2009) and can be repaired through a (non)substantive response. Interestingly, the nature of this response (substantive or non-substantive) had no differential effect on the ability to repair explicit trust. This may be because there were only a small number of cases reporting the implementation of a non-substantive and substantive response, therefore any differences in effects may have been too small to detect.

**Individual differences**

Finally, the studies identified a number of important individual predictors of trust, which are typically neglected in studies of trust repair, despite being shown to be important in organizations (Aryee, Budhwar & Chen, 2002; Conchie & Donald, 2009; Kramer, 2010; Lewicki & Bunker, 1996; Rhoades & Eisenberger, 2001). These related to trait trust, trust propensity, identification with management and industry tenure. The results showed that employees’ holding more general trust in others (generally and specifically in relation to the occupational role of management), with a higher level of identification with management, and those with less experience of working within industry, responded more favourably to a violation of trust. In addition, the results showed that those reporting less personal compliance with safety were more likely to express greater trust in supervisors following trust repair efforts, while those holding weak beliefs in a just world were less likely to
trust. These findings highlight the importance of taking into account individual
differences when considering ways in which to repair trust.

**Limitations and future research**

The research reported in this thesis has provided the first insight into how
trust repair operates within a high-risk context, and the role of substantive responses
in this process. Despite this, it is not without its limitations. First, a number of the
studies made use of experimental vignettes as they allow greater control, can isolate
the effects of individual factors, and allow claims of causation to be made. As a
method, vignettes rely on the use of hypothetical scenarios and the ability of
participants to immerse themselves in the event it depicts. It is possible that some of
the participants in this study were unable to do this and that their responses were
unrelated to how they may actually act in such a situation. Put more simply, the
method may be argued to have relatively weaker ecological validity than a study
based on actual events. While this is a real problem, a number of steps were taken to
address this in the studies: employees (or students) with actual experience of the
work contexts described were used rather than general student populations, scenarios
were adapted from real events (taken from interviews, previous research and
industry-specific literature), and those who failed to respond correctly to the
manipulation questions were (in the main) removed from the main analysis. The
results may therefore be taken as a reliable indication of how trust repair operates
within industry. The finding that similar effects emerged in the non-vignette studies
that focused on real events in a person’s history, or ‘real-time’ events further support
this conclusion.

Second, the study focused on three substantive responses: a preventative
procedure, monitoring and suspension. The responses directed at an individual level
(monitoring and suspension) are arguably negative in nature in that they imply a loss of some privilege or punishment. Because of this, the studies may be argued to say little about substantive responses that may be regarded as more positive in nature, such as re-training. Re-training is a response often taken following events that signal a person’s lack of competence (Choudhury & Mishra, 2010) and emerged as a response used in the contexts studied in this thesis (see Chapters 6 and 9). Unlike suspension and monitoring, re-training may operate more strongly through perceived prevention and/or perceived repentance because it provides individuals with greater knowledge which may re-align the goals of the individual to that of the organization to prevent any future untrustworthy behaviour. However, one key question is whether this response can positively impact trust following acts that signal a lack of integrity. The results in Chapter 6 suggest that it might, but that its effects may be weaker than the responses considered here. Future research would benefit from addressing this question to establish if ‘positive’ responses to violations are equally, if not more effective, than punitive responses.

Third, the research failed to identify which of the response strategies were most effective in repairing employees’ implicit trust. At a substantive level, this may suggest that the nature of responses is less important than the act of responding for implicit trust. However, at a methodological level, it may simply reflect problems of power due to a small sample size. To clarify this, future research may explore which types of substantive responses are strong enough to adjust employees’ implicit beliefs in a positive direction using a larger sample. Research has tended to predominantly identify the effectiveness of responses in the repair of explicit beliefs. However, once implicit beliefs are lowered, it is likely that these beliefs will actually
be the hardest to repair. A focus should therefore be given to both implicit and explicit beliefs.

**Theoretical and practical implications**

The results of the research have important practical and theoretical implications. Firstly, they suggest that following a breach in trust by supervisors, there are a number of actions that organizations can implement to dampen the negative consequences to employees’ trust. These include the implementation of monitoring, suspension and a procedure that prevents similar events in the future. The research also helped contribute to existing research and empirically identify the potential mechanisms through which particular substantive responses operate to effectively repair trust.

When a response is implemented, it is important that employees perceive them to be fair and an appropriate response to facilitate learning and address the underlying cause of the problem (a response that is disproportionate to the action – in either direction – may generate perceptions of injustice). When a response is perceived to be just, employees are more likely to develop perceptions that the supervisor will learn from the violation, and consequently report higher levels of trust.

When deciding on the appropriate response to take to a transgression—one that addresses the behaviour while being mindful of the importance of preserving employees’ trust—organizations should be mindful of the severity of the event. The results of the studies reported in this thesis suggest that when a transgression is performed by senior management, implicates an employee in the event, or results in outcomes that harm or injure another; the response should be more substantial. In these situations, a simple apology will be ineffective in retaining employee trust.
Following a high-risk violation, encouragement should be given to the manager to apologize for the event, but a preventative procedure should be put in place that safeguards employees from similar violations in the future. The results further suggest that when the transgressor is a manager, the response should be voluntary in nature, rather than being imposed by the organization. Employees are likely to then believe the manager is actively committed to refraining from a future violation. The risks of engaging in a trust-based relationship may then be perceived as lower than the potential benefits that can be gained. Importantly, organizations should be mindful that the combination of an apology with monitoring will be less effective.

This study is one of the first studies to empirically test the importance of voluntary and involuntary substantive responses in the repair of integrity-based violations under different conditions of risk and across hierarchical levels.

Finally, the research reaffirms many other studies and shows the general importance of an apology in the repair of trust. In relation to attribution theory (Heider, 1958; Weiner 1992) it suggests non-substantive responses that are internally attributed are particularly important in the repair of trust. On the other hand, mitigating any responsibility will result in employees’ trust reducing further. Management should be discouraged from justifying their actions, blaming someone else, making excuses or denying any wrong-doing.

**Conclusion**

This aim of this thesis was to bridge some of the existing gaps in the trust repair literature and provide a number of important developments to the field. This was made possible through the successful identification of effective non-substantive and substantive responses that helped repair trust in a risk context. In addition to this, the research identified the moderators and mediators which allowed these responses
to exert their positive effects. The overall effectiveness of apologies in the repair of employee trust in management was shown. Apologies help signal regret and a commitment to reform to effectively repair trust. However, when the risk is high, apologies should be implemented with a preventative procedure as this is seen to add an elicit level of trust repair. This procedure should be seen to emanate from the individual themselves when the target is a manager, or when they implicate another employee in the event.

Other substantive responses which are effective in the repair of employee trust include monitoring and suspension, however these responses, in particular monitoring, should be given alone as when employed with an apology, it may be regarded as over-kill and interpreted that the supervisor is not trusted as only the supervisor’s actions are being targeted. Importantly the effectiveness of a substantive response is largely determined by their ability to generate repentance. Although repentance can easily be shown with voluntary responses, it can also be shown with involuntary responses by ensuring that the response is seen as just and a learning tool to regulate and rehabilitate managements behaviour. It can be concluded from these results that organizations can play an important and active role in helping to repair relations between employees and management following a violation of trust. These results help provide an in-depth understanding into the ways in which to repair trust, and largely confirm the initial proposal that substantive responses play an evidently important role in trust repair. It is this finding that can help pave the way for future research in the area so that continuous advancements to the field can be made.
References


Conchie, S. M., & Donald, I. J. (2009). The moderating role of safety-specific trust in the relation between safety-specific transformational leadership and safety


Friese, M., Hofmann, W., & Schmitt, M. (2008). When and why do implicit reaction time measures predict behavior? Empirical evidence for the moderating role of...


243


APPENDICES

Appendix A

1. University Ethical Approval – Liverpool

2. University Ethical Approval – Required by Cardiff University

3. NHS Ethical Approval
Liverpool Ethical Approval

From: Psychology Ethics <psyethic@liverpool.ac.uk>
Date: Tue, 14 Feb 2012 10:33:33 +0000
To: "Conchie, Stacey" <staceym@liverpool.ac.uk>

Final questionnaire is approved,

Rebecca Lawson

Chair, School of Psychology Ethics Committee

From: Conchie, Stacey
To: Psychology Ethics
Cc: Woodcock, Helena
Attachments:

Hi,

Final questionnaire (to be associated with this project) for approval.

Thanks,

Stacey

From: Psychology Ethics
To: Conchie, Stacey
Cc: Woodcock, Helena
Inbox
13 January 2012 10:10

Thanks for sending the attachments.

The extension is approved to ethics application PSYC07080101 - Stacey Conchie - Trust repair in high-risk situations: the effects of apology, blame and denial.

Rebecca Lawson

Chair, School of Psychology Ethics Committee

From: Conchie, Stacey
To: Psychology Ethics
Cc: Woodcock, Helena
Attachments:
10 January 2012 13:59
Hi,
Attached is a questionnaire associated with the study mentioned in the subject line. The questionnaire will be used in an online survey with a railway transport company. Additions have been made to reflect this in the original ethics form (also attached).

Might you please take chair's action and approve the questionnaire, and its administration through an online portal. The electronic version of the questionnaire was set-up by CSD (and will be run through them) and requires participants to read information on the first screen and give their consent (by clicking yes or no) before they gain access to the questionnaire. Those failing to answer this question, or clicking 'no' will have their session terminated and will be thanked for their time.

Thanks,

Stacey

From: Psychology Ethics
To: Conchie, Stacey
Cc: Woodcock, Helena
Inbox
29 March 2011 15:18

Dear Stacey,
These scenarios can be approved too.
Caro

Conchie, Stacey

To: Psychology Ethics
Cc: Woodcock, Helena
28 March 2011 20:58

Hi,

In addition to the scenario I forwarded earlier today, might it also be possible to approve the attached scenarios and questionnaire please? The questionnaire is very similar to one used previously, but the scenarios are new (the information in brackets represent different variations that will be used).

Thanks,

Stacey

From: "Conchie, Stacey" <staceym@liverpool.ac.uk>
Date: Thu, 15 Jul 2010 07:55:38 +0100
To: Psychology Ethics <psyethic@liverpool.ac.uk>
Hi Rebecca,

Sorry for the delay. I’m on holiday at the moment, and not checking my emails as often.

I was seeking approval for an extension to PSYC07080101.

The changes are as follows:
1. The sample has been extended to include employees in a gas company (see section B2, paragraph 4 & 5 of the attached)
2. The interview part of the study has been extended to include two additional elements – i) participants will be asked to complete an implicit trust task (see section B2, para 4 & section B3 – my colleague will be involved in showing Helena how to administer the implicit trust task); ii) participants will be asked to complete a measure of emotions at three time points (see section B2, para 4; attached questionnaire; section C3, para 3). For the second task, participants will be told that the measure is for a different study – basically, there will be a small amount of deception. The reason for this is outlined in the case for expedited review.
3. I’ve outlined the additional risks to the researcher from working with this sample in terms of the risks inherent within the locations (office, refinery, offshore) and the steps taken to mitigate these risks (section E3).

We are due to visit the employee sample a week Friday and hope this will be enough time for you to approve the extensions to the study. Apologies again for the delay.

Thanks,

Stacey

From: Conchie, Stacey
Sent: 04 July 2010 20:15
To: Psychology Ethics

Hi Rebecca,

Sorry to ask for yet a further approval, but we’ve recently been given the opportunity to conduct research with a local gas company. I’ve included details related to this in the ethics form attached and wondered if you might approve the addition? In particular, I’ve included reference to the gas sample in the background section of the study, added the company as a research site, and also added a potential risk to the researchers which comes from collecting data in these ‘risk’ locations (the steps taken to mitigate these problems are also noted). I’ve also attached the intended interview protocol, which is a slight revision on the one that will be used with nurses.
Thanks (and sorry for giving you more work).

Stacey

From: Psychology Ethics  
Sent: 21 May 2010 12:19  
To: Conchie, Stacey  

Dear Stacey,

I approve extension of this ethics application to cover any adults,

Rebecca

Chair of Ethics

From: Conchie, Stacey  
Sent: 17 May 2010 21:26  
To: Psychology Ethics  

Hi Rebecca,

Might it be possible to approve a small extension to Helena’s sample population for her interviews, pl? She originally stated that she would use student nurses on Liverpool’s courses. However, she has been given the names of other people (nurses, but non-students) that would also be willing to be interviewed. These other people have been suggested through a snowballing technique – basically, Helena’s friend (a nurse) has suggested them. I can imagine that other people will also be suggested in this way and so the approval she/we are now seeking will also cover these incidents. I can’t envisage any ethical problems with interviewing this sample as all procedures will be kept constant to those used with the professional nurses recruited through Liverpool. However, if there is an ethical issue that I’m missing then pl let me know.

Thanks,

Stacey

From: Psychology Ethics  
Sent: 23 April 2010 10:56  
To: Conchie, Stacey  

Dear Stacey,
your modifications have been approved.

Rebecca Lawson

Chair, Psychology Ethics Committee

To: Psychology Ethics
Cc: Woodcock, Helena
Attachments:
21 April 2010 10:24

Hi Rebecca,

We’ve added a further – short – study to the ethics form (described in the second to last paragraph in section B) with relevant additions made to other parts of the form. Might it be possible to approve this addition, please?

Thanks,

Stacey

From: Psychology Ethics
Sent: 01 April 2010 12:18
To: Conchie, Stacey
Subject: PSYC07080101 - Stacey Conchie - Trust repair in high-risk situations: the effects of apology, blame and denial.

Dear Stacey,

you modifications have been approved.

Helena Woodcock had already been added as a named researcher on this project.

I have extended the end date to November 2012 - but note that approvals last for a maximum of 5 years so you will not be able to extend beyond this.

Rebecca

From: Conchie, Stacey
Sent: 31 March 2010 19:43
To: Psychology Ethics
Subject: FW: psyc07080101: Trust repair in high-risk situations: the effects of apology, blame and denial.

Hi Rebecca,

I wondered if you might be able to approve the additions I’ve made to a body of research that has been through the ‘ethics mill’ a few times (see below for the
various approvals along the way). The additions this time around are:

1. Helena Woodcock has been added to the list of student researchers (PhD)
2. The study has been extended to 2012
3. An additional set of studies looking at more factors and also involving interviews has been included (in the summary section I’ve added a long paragraph detailing what’s involved)
4. I’ve added information to various sections of the ethics form (participant numbers, storage of data, etc.) to reflect the addition of the interview data.

I’ve attached the revised ethics form and also the protocol that Helena plans to use in the interviews. We’ve spoken to somebody in nursing (Denise Prescott) about potential access to student nurses and she is happy to grant this subject to ethical approval for the study at School level. How long does an addition of this sort usually take to approve?

Thanks,

Stacey
17 October 2011

Helena Woodcock
School of Psychology
Eleanor Rathbone Building
Bedford Street South
Liverpool
L69 7ZA

Dear Helena,

Re: Trust repair in high-risk situations: the effects of apology, blame and denial.

Thank you for submitting your research proposal to the SONMS Research Review and Ethics Screening Committee for permission to access student nurses in order to collect data.

The Committee has now had the opportunity to review your proposal and also notes that you have received ethics approval for your study from Liverpool University ethics committee. I am pleased to inform you that the Committee is happy to approve your plans subject to two changes as outlined below.

We suggest you liaise with Mrs Jan Campsie, Programme Manager, in order to arrange access. Mrs Campsie’s contact details are as follows: Tel: 029 20 687824, or E Mail: Campsiej@cf.ac.uk. Please be advised that when you approach Mrs Campsie to arrange access you should also forward a copy of this letter in order to demonstrate that you have received RRESC approval. When your research negotiations are complete please contact me giving full details of the group accessed for our database.

We wish you well with your project.

Yours sincerely

Rosemary Williams
Research Administrator

The Committee would like you to amend as follows:

The information sheet

1) In paragraph 2 it states: ‘The study is looking at how events impact upon student nurse’s attitudes and behaviours’. Please amend to read as follows: ‘The study is looking at how events impact upon student nurses’ attitudes and behaviours’?

2) The new consent form has a typo. ‘I confirm that I have read and have understood the information sheet dated [DATE] for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.’. This should read as follows: ‘I confirm that I have read and have understood the information sheet dated [DATE] for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily’?
The Royal Liverpool and Broadgreen University Hospitals
NHS Trust
Royal Liverpool University Hospital
Prescot Street
Liverpool
L7 8XP

TRUST APPROVAL LETTER

Rec Ref: 10/H1005/44

Dr Stacey Conchie
School of Psychology
University of Liverpool
Bedford Street South
Liverpool
L69 7ZA

27/10/2010

Dear Dr Stacey Conchie

Re: Trust in Nurses' Working Relationships: Its Importance and Restoration
R&D No: 3999/ Uol0000654

The above study is a Non-commercial, Qualitative Only study, sponsored by University of Liverpool and is funded by the Researcher/s. The Trust is now happy for you to commence work on this study, including amendments, using the following ethically approved documents.

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<th>Dated : 16/06/10</th>
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<tr>
<td>Consent</td>
<td>Version: 1</td>
<td>Dated : 16/06/10</td>
</tr>
</tbody>
</table>

May I take this opportunity to remind you of your responsibilities as PI for this study to:

- Inform R&D of any SUSAR's within the Trust as per Trust policy and provide copies to R&D of annual and safety reports to Ethics and if appropriate the MHRA.
- Comply with the Research Governance Framework 2nd Ed 2005 including but not limited to the Medicines for Human use (Clinical Trials) 2004 act plus it's appendices and the Data Protection Act 1998.
- Read, disseminate to research team and acknowledge to R&D, Trust research SOP announcements
- Report SAE's as per protocol and Trust policy and record total number on OSIRIS
- Inform R&D of any amendments to, or changes of status in, the study
• Ensure any conditions to approval stipulated by the MHRA/REC have been addressed prior to implementation of approved changes.
• Ensure that all screening and recruitment activity is recorded on OSIRIS in a timely manner.
• Complete and return the R&D annual report form in a timely manner.
• Maintain the study site file (if not provided by the sponsor a template is available on the Trust intranet).
• Provide copies of publications.

Investigators who do not comply with the above will be dealt with in accordance with the Trust Disciplinary policy.

I wish you every success with your research please contact the R&D Department if you require any advice on the above points.

Yours sincerely,

Julia West
Deputy Director R&D

cc. Head of Directorate
    University of Liverpool

• I………………agree to the terms and conditions of the Trust research approval for R&D 3999/ Uol000654, Trust in Nurses’ Working Relationships: Its Importance and Restoration and am aware of my responsibilities under the Research Governance framework and Trust Research SOP’s.

Sign…………………………………………………………………………………..date…………………………

Please return a copy of this letter to the R&D Department RLUHT
Thank you
Appendix B

Vignette - Chapter 4

“It’s been over a year since you started working for this company. On one particular day, your supervisor Dave/manager Pete, wanted to speed up production and so knowingly violated a safety procedure to achieve this. It’s well known that this violation increases the risk of an accident. Unfortunately, somebody was injured following Dave’s/Pete’s actions and required medical attention/ Fortunately, nobody was injured following Dave’s/Pete’s actions. Dave/Pete apologized for the event, expressed his remorse and promised that it would never happen again/ Dave/Pete didn’t take responsibility for the event and instead offered justifications for his behaviour. A procedure was put in place to prevent a similar event from occurring in the future, as suggested by Dave/Pete/The company took no action.”

Appendix C

Non-Implicated Vignette – Chapter 5

“You have been working on a ward as a student nurse for some time. On one particular day, your mentor (a senior nurse) wanted to rush things along and in doing so, did not check a patient’s hospital/NHS number, date of birth or name from their wristband, before administering medication. It was later revealed that your mentor was rushing because she did not want to work any later than her scheduled hours of work. Fortunately it was the correct patient who received the medication/Unfortunately, it was the wrong patient who received the medication. Your mentor apologized for the event, expressed her remorse and promised that it would never happen again/Your mentor didn’t take responsibility for the event and instead offered justifications for her behavior. The hospital has put a procedure in place/Your mentor has asked for a procedure to be put in place to prevent and safeguard against a similar event occurring in the future / No action was taken by the hospital.”

Implicated Vignette – Chapter 5

“You have been working on a ward as a student nurse for some time. On one particular day, your mentor (a senior nurse) wanted to rush things along and so asked you to give a subcutaneous injection (e.g., Fragmin or Insulin) while she dealt with another patient—even though you had not been appropriately trained for this. It was later revealed that your mentor was rushing because she did not want to work any later than her scheduled hours of work. Fortunately, you administered the injection correctly/Unfortunately, you did not administer the injection correctly. Your mentor apologized for giving you this task without her supervision, she expressed her remorse and promised that it would never happen again/Your mentor didn’t take responsibility for the event and instead offered justifications for her behavior. The hospital has put a procedure in place/Your mentor has asked for a procedure to be put in place to prevent and safeguard against a similar event occurring in the future / No action was taken by the hospital.”
Appendix D

Newspaper Clipping - Chapter 7

**Insulin error by senior nurse questions patient safety**

*Lea Hopkins*

*28.11.2011*

A patient aged 32 spent 3 days in a coma/experienced confusion and fainting following the injection of a wrong dose of insulin by a senior nurse at Whitehall trust. The patient, referred to as Mr P, suffers from Type I diabetes and requires injections of insulin to control levels of glucose in his blood. It emerged this week that Mr P was given an overdose of insulin, whilst admitted to Whitehall trust for a different medical issue, which led to hypoglycaemia.

The incident is said to have occurred as a result of senior nurse, Debbie Smith, failing to check and monitor Mr P’s blood sugar levels. The procedure of checking patient observations is standard practice and is aimed at avoiding such medication errors. The procedure is well-known to Miss Smith in her role as senior nurse, and also mentor to trainee nurses.

![Right: Debbie Smith (senior nurse) administered insulin overdose](image)

Reports show that Miss Smith has 10 years experience and is regarded as a competent nurse. However, following her mistake, Miss Smith falsified paperwork to try and cover up her error. Derry Roach, commissioning director at the hospital, said 'We place great importance on patient safety and expect our fully qualified nurses to follow strict procedures to ensure our patients receive the best possible care. We are conducting a full investigation in to the incident to ensure such an event does not happen again.'
Memo

To: All employees
From: CommissioningBoard@nhb.uk
Date: 02/12/2011
Re: Patient safety

In regards to the recent newspaper article which was published 28th November, please note the hospital has dealt with the incident as we believe appropriate. The hospital has decided that no disciplinary action towards Debbie Smith should be taken. The hospital has disciplined Debbie Smith which will result in her future actions on the ward being monitored. The hospital has disciplined Debbie Smith which has resulted in her suspension.

Please use this incident as a reminder that procedures and protocols should be followed at all times.

NHB Commissioning Board

TEL: 0111 588 455
FAX: 0111 588 488
Appendix E
Newsletter – Chapter 8

LATEST RAIL NEWS: SAFETY VIOLATION CAUSES NEAR MISS

“An investigation is underway after a supervisor operating for the company ‘IMEGA’ overlooked the Safe Systems of Work planned for a task, in order to speed up its completion. The Safe Systems of Work ensures that a systematic examination of each task is carried out and potential hazards are identified. In this incident, the Safe Systems of Work required a minimum of 3 employees to complete the task safely, which the supervisor attempted to complete with only 2 employees. Reports have found no obvious reasons for the supervisor’s actions, such as a back-log of work. According to one source the supervisor had a total disregard for others’ safety and acted recklessly.”

Statement Release by Supervisor – Chapter 8

“The claim that I overlooked the Safe Systems of Work is true. I did breach the rules and put others at risk. I apologise for this and promise it will not happen again. IMEGA have taken me through the disciplinary procedures (and I will now be monitored by management/which has lead to my suspension). (I have also asked a new computer system be implemented/IMEGA have also implemented a new computer system) which records the Safe Systems of Work planned for each task and requires a log to be made of the workers involved in the task before it commences. The new system will flag up any conflicting logs which fail to comply with company safety procedures and send a report to management. Documents have been released showing that these actions have been implemented.”

APPENDIX F

Practice Blocks – Chapter 9

Practice Target Words (Baseline Phase);

- Trustworthy
- Untrustworthy
- Trusting
- Mistrusting
- Distrust

Order presented was randomized across participants

Practice Priming followed by target word (Priming Phase);

- Fireman, Disloyal
- Police Officer, Sneaky
- Police Officer, Bank on