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Methodological issues in whistle-blowing intentions research: addressing the social desirability bias and order effect bias

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Abstract

The issues of social desirability bias and order effect bias are common problems in ethics. Methodologically, these two problems may weaken the study’s validity and reliability thus, making the results of the study invalid. Utilizing vignettes in whistle-blowing research may further add to these problems as the case scenario in the vignettes may enhance respondents’ social desirability bias and the sequence of presentation order of vignettes may then present the problem of vignettes’ order effect bias. The paper addresses these two problems by statistically examining the effects of these two types of bias within the study of whistle-blowing intentions.

Keywords: Bias; whistle-blowing; ethics;

1. Introduction

Whistle-blowing is one of the challenging topics to be studied (Patel, 2003) within the ethic study areas. Patel (2003) further posited that researchers can only examine their respondents’ whistle-blowing behavioural intentions rather than observing their actual behaviour. Studies have acknowledged that other types of research design such as interview, field-experimental and longitudinal survey design may not be workable in whistle-blowing research. Although some researchers recognise that it is essential to measure actual whistle-blowing behaviour in order to understand whistle-blowing tendencies (Miceli, Near, Rehg, and Van Scotter, 2012), it is however not practical in social science research. Miceli and Near (1988, p. 277) assured that, “... because of obvious ethical concerns, one cannot randomly select employees to witness manipulated wrongdoing in order to determine which individual or

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situational characteristics are associated with whistle-blowing”. Even if the studied be carried on, no participants may be willing to be identified and responded to the survey. Such situation may then make the study’s data become even invalid (Miceli and Near, 1988)

Whistle-blowing intention refers to respondents’ likelihood to report (un)ethical behaviours represented in hypothetical vignettes. The use of multiple vignettes is common in research investigating respondents’ whistle-blowing intentions (see Sonnier, 2013; Trongmateerut and Sweeney, 2013). Hypothetical scenarios or vignettes allow researchers to approach sensitive issues by posing hypothetical situations to which the participants may respond. The approach of using vignettes is considered as appropriate and effective for acquiring data in whistle-blowing studies (Gundlach, Martinko, and Douglas, 2008) and it provides a more realistic context for the respondents (Reidenbach and Robin, 1990). Despite its wide usage, studies acknowledged its limitations. Brennan and Kelly (2007) and Xu and Ziegenfuss (2008) reported that hypothetical scenarios are not able to capture the exact real world information making the validity and generalisability of findings of a study to be questioned. Miceli, Near and Dworkin (2008) were uncertain whether respondents who responded in a hypothetical situation would actually act if they are facing the real situation. Furthermore, if these respondents did respond, they would then possibly be susceptible to social desirability bias ( Miceli et al., 2008), a type of bias that researchers need to addressed to. Apart from social desirability bias, the problem of vignettes order effect bias also need to be tackled too. The use of multiple set of vignettes may present bias, should the sequence of presentation order of the vignettes are not examined. These two forms of bias need to be controlled for in order to enhance the validity of any ethics study. The purpose of this study is to statistically examine the effect of this problem in whistle-blowing intentions by utilising a set of vignettes from previous studies.

2. Literature review

2.1 Social Desirability Bias

Studies examining sensitive behaviour may be distorted by social desirability bias (Krumpal, 2013) especially a study that examines individual’s likelihood to whistle-blow on corporate wrongdoing. Social desirability bias refers to, “... respondents give a “normative” response or a socially acceptable answer rather than a honest answer” (Neuman, 2006, p. 285). To be specific, an individual may have the propensity to understate (overstate) situations that could be regarded as culturally undesirable (desirable) behaviours (Bernardi and Guptill, 2008). It can clearly be identified that, majority of studies failed to control this type of problem in ethics research (Bernardi and Guptill, 2008; Krumpal, 2013) as such this could affect the validity of these studies, should the bias is not controlled for (King and Bruner, 2000; Nyaw and Ng, 1994).

There are three types of approaches to minimise the social desirability bias issue in a study of whistle-blowing intention. First, the study may assure the anonymity and confidentiality of information provided by its respondents (King and Bruner, 2000). Second, in utilising the vignettes, respondents need to be asked in a first-person approach – as if they are the actor being described in each vignette. This is contrary to Patel’s (2003) study who used a third-person approach. The main reason why the first person approach is chosen is mainly due to Malaysian respondents are multi-racial. If the actor in the vignettes are of different ethnicity from the respondent (either as Ahmad - Malay, Lim - Chinese or Raju - Indian) that could easily harm the validity of the survey. The use of first-person approach may also avoid gender bias, as the sample names mentioned earlier (Ahmad, Lim or Raju) are all referring to male actors. There could be a possibility that the gender of the whistle-blower interacts with the gender of the wrongdoer (Miceli, Near, and Dozier, 1991), thus making the study invalid especially when gender is also a variable of interest. The final measure is by asking two additional questions following each vignette. The two questions are: (1) “Rate the likelihood YOU would report to internal parties in your organisation”, and (2) “Rate the likelihood that YOUR COLLEAGUES would report to internal parties in your organisation”. This is consistent with the method adopted by other studies examining the respondents’ likelihood of whistle-blowing behaviour (Patel, 2003; Zhang, Chiu, and Wei, 2009). The difference of means data between these two questions shall account for the magnitude of social desirability bias (Cohen, Pant, and Sharp, 1996).
2.2 Vignettes Order Effect Bias

A whistle-blowing intentions study usually employs more than one type of vignettes, which are presented in a sequence order. Methodologically, the choice of presentation order of the vignettes may significantly affect the respondents’ answers (LaSalle, 1997; Malhotra, 2009). A type of bias, known as an order effect bias can thus affect the validity of the research instrument (Dillman, 2000). Hogarth and Einhorn (1992) proposed a theory that the order of information has an effect on individual’s decision-making behaviour, where information processed earlier in the sequence will have greater or less influence than information that is being processed later. If the earlier information has greater influence on a final belief, than the order effect is known as a primacy effect. Meanwhile, if the later information has greater influence, the effect is known as a recency effect. In this study, it is imperative to examine whether the first vignette being presented to the respondents have a greater influence of whistle-blowing decision than the fourth vignette or vice versa. In other words, the study would like to examine whether the order of vignettes in the survey influence respondents’ ethical behaviour choices, as Asch (1946) found that first impressions do matter as it may influence individual’s ethical decision.

The problem of order effects has been observed in a number of studies (see Hogarth and Einhorn, 1992; LaSalle, 1997; Malhotra, 2009), however, such problem received little attention in the whistle-blowing literature. None of whistle-blowing studies that utilised vignettes did address the issue of order effect bias despite utilising a set of vignettes sequentially in examining their respondents’ whistle-blowing decisions. The reason could be due to such studies employ large number of respondents that were selected at random basis. Hence, it was not easy to undertake a test to conduct the effect of such bias. Although studies by Xu and Ziegenfuss (2008) and Zhuang, Thomas and Miller (2005) address this, their respondents were given surveys that contained vignettes or scenarios that had prematurely been random-ordered to remove the potential order effects bias, without testing if such effects exist. For the current study, the issue of order effect bias is tested prior to actual distribution of mail survey, simply to ensure that the internal validity of the survey is not harmful. If an order effect does exist, Eisenberg and Barry (1988) cautioned that a rigid procedures should be employed to ensure that such bias does not affect the researchers’ judgments.

3. Research Method

3.1 Vignettes Development

Vignettes approach, borrowed from ethics research (Ellis and Griffith, 2001), are defined as, “short descriptions of a person or a social situation which contain precise references to what are thought to be the most important factors in the decision-making or judgement-making processes of respondents” (Alexander and Becker, 1978, p. 94). The approach requires the respondents to rate the ethicality of an actor in the vignette. Vignettes may either be developed from practice knowledge, previous research or from preliminary studies (Taylor, 2006). Randall and Gibson (1990) suggested that vignettes need to be developed with greater realism in order to mitigate ambiguity and vagueness. A vignettes with a realistic content shall allow the respondents to feel themselves as in the situation of the actor being portrayed in the hypothetical situation (Patel, 2003). The use of vignettes allow researchers to manipulate their variables of interest, making such an approach much more advantageous (O’Fallon and Butterfield, 2005).

The current study utilised four types of ethical vignettes adopted from previous studies. These four vignettes is considered as appropriate as O’Fallon and Butterfield (2005) cautioned that, the use of too many vignettes may cause respondents to become fatigued and overloaded with information while if there is too few vignettes, this may limit the study chances to manipulate variables of interest, which will then probably resulting in non-response bias. The first vignette is about a Marketing Executive taking unreported paid time off, adopted from Wortman (2006). The second vignette deals with an act of overstating purchases amount by a Production Manager, which was adopted from Brennan and Kelly (2007). The third vignette tells about a request for reduction in doubtful debts by Chief Executive Officer, adapted from J. R. Cohen et al. (1996). The last vignette, about a request from a Chief Financial Officer to ignore a transaction of unrecorded liabilities, adapted from Knapp (1985). Generally, all the vignettes require its respondents to indicate how likely they would whistle-blow within their own organisations.
3.2 Internal whistle-blowing intention

Internal whistle-blowing intentions were measured using two items. The first item asked in the first person approach - the probability that the respondent will engage in internal whistle-blowing behaviour. The second item, on the other hand, asked in the third person approach - the probability that his/her peers and colleagues would take similar action. A five-point Likert type scale was used to determine the internal auditors’ and their colleagues’ willingness to whistle-blow internally - similar to studies by Kaplan and his colleagues (see Ayers and Kaplan, 2005; Kaplan and Schultz, 2007). Results of order effect bias and social desirability bias are discussed in the following section.

4. Findings

4.1 Pilot Testing for Potential Order Effect Bias

As discussed previously, the potential incidence for order effect bias needs to be determined prior to the actual mail survey distribution. The session was conducted as part of pilot testing session of a major study. The test was conducted among internal auditors registered with Institute of Internal Auditors of Malaysia (IIAM) who attended their one-day Continuous Professional Development seminar in Kuala Lumpur. Permission has been sought from IIAM after explaining the purpose and the importance of conducting this order effect test. The session was administered purely by the staff of IIAM without the presence of the researcher. A total of twenty IIAM members attended the said session. As such, the sequence order of vignettes presentation for these IIAM members were organised as follows:

<table>
<thead>
<tr>
<th>Version</th>
<th>Vignette presentation order (Vignette No.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>B</td>
<td>2 3 4 1</td>
</tr>
<tr>
<td>C</td>
<td>3 4 1 2</td>
</tr>
<tr>
<td>D</td>
<td>4 1 2 3</td>
</tr>
</tbody>
</table>

20 copies of survey (5 copies x 4 versions between-subjects design) were distributed at random to recognise the possibility of vignettes order influence on respondents’ whistle-blowing intentions. Each respondent received only one copy each of the four versions available. Prior to answering all the required sections, respondents were requested to read through all the four vignettes presented sequentially. Out of the 20 copies distributed, only 18 copies were returned by mail to the researcher, whereby 5 copies received for Version A, 4 copies for Version B, 4 copies for version C and 5 copies for Version D.

A non-parametric Friedman Test (alternative to the one-way repeated measures of analysis of variance) is used as there were same sample of respondents being measured under three or more different conditions (Pallant, 2007). To test the presence of order effect bias, a Seriousness of wrongdoing variable was chosen. The result of the test indicated that, there was no statistically significant difference in Seriousness of wrongdoing variable across the four version of vignettes, $\chi^2 (3, n = 18) = 5.06, p > .167)$. To test further, another variable, Ethicality of the behaviour, was also tested. Similarly, the result of the Friedman Test indicated no statistically significant difference in Ethicality of the behaviour variable across all four sets of vignettes, $\chi^2 (3, n = 18) = 5.91, p > .116)$. This indicates that the sections for all the four vignettes responses are free from order effects bias.

4.2 Social Desirability Response Bias Analysis

Social desirability bias (SDRB) was then measured by asking respondents the two set of questions explained earlier (refer item 3.2). Responses were captured on a five-point Likert scale ranging from 1 to 5, in which 1 was equal to “Less likely”, and 5 equal to “Very likely”. The difference in mean responses between these two questions is the measure of SDRB (Cohen, Pant, and Sharp, 1998). As shown in Table 2 below, the mean scores for "Your Colleagues" question were higher than compared to the “You” question across all four vignettes. The results indicate
that respondents were less likely to engage whistle-blowing, as compared to their own intentions. The largest mean difference is found in responses to Vignette 2 (0.49). The next largest difference is in Vignette 4 responses (0.47), while the smallest difference is found in response for Vignette 3 (0.31).

Table 2. Test of social desirability response bias in each vignette

<table>
<thead>
<tr>
<th>Vignette</th>
<th>You (A) Mean StdDev</th>
<th>Your Colleague (B) Mean StdDev</th>
<th>Mean Difference (A) - (B)</th>
<th>Wilcoxon Signed Rank Test Z</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.74 1.050</td>
<td>3.32 1.047</td>
<td>0.42</td>
<td>-5.542</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>4.49 0.895</td>
<td>4.00 1.091</td>
<td>0.49</td>
<td>-6.098</td>
<td>.000</td>
</tr>
<tr>
<td>3</td>
<td>3.56 1.328</td>
<td>3.25 1.234</td>
<td>0.31</td>
<td>-4.864</td>
<td>.000</td>
</tr>
<tr>
<td>4</td>
<td>4.10 1.071</td>
<td>3.63 1.175</td>
<td>0.47</td>
<td>-6.211</td>
<td>.000</td>
</tr>
</tbody>
</table>

The Wilcoxon Signed rank test (equivalent to parametric t-tests for paired samples) was used to determine the existence of SDRB existed among internal auditors in their responses across each of the four vignettes. The results demonstrated that there were significant differences between the scores on "You" and "Your Colleagues" questions on all four vignettes (2-tailed, p<.001). As such, this indicates the existence of SDRB among internal auditors in this study. Although social desirability response bias existed in this study, prior ethics studies have stated that it was not a salient threat to the internal validity of the study's findings (Nguyen, Basuray, Smith, Kopka, and McCulloh, 2008). Furthermore, Randall and Fernandes (1991, p. 813) stated that, “previous research has convincingly demonstrated that observed levels of socially desirable responding vary with the levels of anonymity”. As the anonymity of the respondents in this study has been assured (as discussed earlier in item 2.1), the level of social desirability response bias in this study is considered as minimal.

5. Conclusions

Although vignettes are widely used to address potentially sensitive issues in ethics research (Fahie, 2014), the use of such approach has its limitations. Their uses allow respondents the feel to indicate their intentions with no real commitment to the actual behaviour which may then lead to the problem of social desirability bias which were obvious in this study. Contrarily, the use of multiple set of vignettes did not present order effect bias as the sequence of presentation order of the vignettes were examined. This confirms that internal auditors scrutinised each type of case independently and believe that each type of wrongdoing is distinctive and case specific (Miceli, Near, and Schwenk, 1991).

All data were obtained from one source – the respondents. This may raise some concerns regarding the validity and generalisability of the findings as respondents may perceive themselves as being much bolder, more ethical or more capable than their colleagues. However, Miceli and Near (1984, p. 703) highlighted that, “although self-reported data may be flawed, it is not known how better data can be obtained practically”. Chiu (2003) has also suggested that it is difficult to find a second source of information about an individual’s ethical behaviour, one that is neither distorted nor biased. As the study relied upon the perceptions of internal auditors, the usefulness of the results depends upon the accuracy and honesty of the self-reported data. As such, the decision for internal auditors to engage into whistle-blowing behaviour is a personal experience that can only be captured by merely asking respondents’ likelihood to engage into it. Although the presence of social desirability bias is obvious in this study despite it has been meticulously addressed in the Research Method chapter earlier, the respondents may always be tempted to give the socially desirable response rather than describe what they actually think, believe or do.

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References


