A study of the effect of message framing on oocyte donation

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BACKGROUND: The aims of this study were to examine the effect of gain- and loss-framed messages on British and South East Asian women’s intentions towards oocyte donation and to examine whether the components of the theory of planned behaviour influenced the relationship between framing and intentions.

METHODS: A total of 406 women participated in this study (mean age = 22, SD = 2.9). There were 211 participants in the gain condition and 195 in the loss condition.

RESULTS: An analysis of covariance found a main effect for framing (F(1, 402) = 6.3; P < 0.01) after controlling for existing attitudes towards oocyte donation and pre-message intentions to donate. Specifically, participants in the gain-framed condition were significantly more likely to report higher post-message intentions to donate oocytes than participants in the loss condition. However, the framing effect was only observed with British populations and not with women from South East Asia. Further, structural equation modelling analyses revealed lower levels of ‘perceived behavioural control’ (β = −0.420, P < 0.03) and positive attitudes towards ‘the importance of genetic ties between parent and child’ (β = 0.70, P < 0.001) were direct predictors of post-message intentions in the gain (but not loss) frame condition.

CONCLUSION: Findings obtained from this study indicate that oocyte donation campaigns should consider using gain-framed messages in recruitment appeals and message frames should be matched to the target populations’ perceived level of behavioural control.

Key words: oocyte donation / infertility / framing effect / theory of planned behaviour / health promotion

Introduction

There is a shortage of donated oocytes in the UK (Blyth and Frith, 2008) and this is more acute for non-White populations (Murray and Golombok, 2000). Murray and Golombok found that 62% of clinics had difficulties in recruiting Indian donors, 49% for Pakistani, 42% for Bangladeshi and 15% of clinics had difficulties in recruiting South East Asian oocyte donors. In addition, recruitment of donors is time consuming and costly (Gorill et al., 2001). There is a need therefore for effective health campaigns to improve and expand donor recruitment. Unfortunately, there is a lack of experimental or intervention designed investigations within the oocyte donation literature (Purewal and van den Akker, 2009a), which could assist clinicians targeting donors. In addition, Moorman and Matulich (1993) argued that most health campaign studies are limited to demographic or psychological factors. Although, health campaigns need to accommodate for these variables, they also need to utilize optimal strategies for increased effectiveness. One such strategy used in persuasive health campaigns has been the framing effect.

Framing effect is based on the Prospect theory that predicts different preferences for equivalent outcomes that are framed either positively (as gains) or negatively (as losses) (Kahneman and Tversky, 1979, 1981). Studies have found that gain- and loss-framed messages can influence choices, attitudes and behaviours differently (Kahneman and Tversky, 1981; Wilson et al., 1988; Rothman et al., 1993). According to the framing effect, people avoid risks when considering gains, but prefer risks when considering losses. Kahneman and Tversky (1981) examined participant’s responses to a hypothetical epidemic Asian flu. Participants had to choose between two options: option A—save 200 people for sure (sure option) and option B—all 600 will die with a probability of two of three, or nobody will die (risky option). Options A and B were framed positively as gains. Another group of participants were presented with negatively framed options as losses: participants had to choose between option C—400 people will die for sure (sure option) or option D—all 600 will die with a probability of two of three, or nobody will die (risky option). Options A and B were framed positively as gains. Another group of participants were presented with negatively framed options as losses: participants had to choose between option C—400 people will die for sure (sure option) or option D—all 600 will die with a probability of two of three, or nobody will die (risky option). All options offer equivalent contingencies, thus there should not be any systematic preference. However,
Kahneman and Tversky found that participants were more risk averse in the positively framed condition (72% of the participants preferred the sure option) whereas, participants were more risk seeking in the negatively framed condition (78% of participants preferred the risky option). These results indicated that the presentation of information as gain or losses can be powerful and could potentially influence people’s preferences and decision-making processes.

The characteristics of the behaviour and individual variability may also moderate the influence of the gain or loss frames (Rothman et al., 1993). Loss frames have been shown to be more effective in promoting health detection because this behaviour is perceived to be risky, whereas gain frames have been shown to be more effective in prevention behaviour because it promotes certainty (Rothman and Salovey, 1997; O’Connor et al., 2005). Indeed, previous work has found prevention behaviours such as doing exercise (Robberson and Roger, 1988) and using sunscreen (Rothman et al., 1993; Detweiler et al., 1999) are best promoted by using the gain-framed message. Specifically, Robberson and Roger (1988) found gain frames that emphasize the positive appeal to self-esteem (i.e. to enhance self-esteem) were better at persuading participants to adopt healthy lifestyles (i.e. exercising more) than negative appeals to self-esteem. However, detection behaviours such as screening for breast cancer (Banks et al., 1995) and skin cancer examinations (Block and Keller, 1995) are best promoted using the loss-framed message. Specifically, Banks et al. (1995) found that loss-framed messages that emphasized the medical risks of not getting a mammogram were significantly more effective than gain-framed messages that emphasized the medical benefits of getting a mammogram. As predicted, O’Connor et al. (2005) also found that loss frames were better at promoting intentions to use the male contraceptive pill because the male contraceptive was perceived as potentially risky. However, they found that the loss frame only influenced intentions in men with positive attitudes towards the male contraceptive pill as measured by using components of the theory of planned behaviour (TPB) (Ajzen, 1985, 2002). O’Connor et al. found no other TPB variable (subjective norms or perceived behavioural control) moderated the framing effect, thus indicating that in parts, the TPB could be used to explain results.

Maule and Villejoubert (2007) argued that a major criticism of health research in framing is that it fails to account for the influence of pre-existing intentions. For example, Wong and McMurray (2002) found that smokers reacted differently to the framed messages depending on their pre-intentions towards smoking (intending to give up or not). One recent study that did account for pre-intentions was Reinhart et al. (2007) investigation on the effect of loss- and gain-framed messages on reactions to organ donation campaign. The gain message highlighted the benefits associated with being a potential donor, whereas the loss condition highlighted the cost associated with not being a donor. They found a main effect for framing after controlling for pre-intentions towards organ donation; specifically participants assigned to the gain-framed message reported more positive reactions to organ donation than participants assigned to the loss-framed message. There are some similarities between organ donation and oocyte donation (i.e. individuals altruistically agree to donate part of themselves to help others) and there is potential that the framing effect could be applied to oocyte donation to aid fertility clinics in their recruitment drives. The aims of this study were therefore to examine the effect of gain and loss-framed messages on women’s intentions towards oocyte donation and to examine whether components of the TPB influenced the relationship between framing and intentions to donate oocytes, in White and non-White populations.

### Materials and Methods

#### Design and measures

An independent design was used and the study was completed online. Subsections of the English translated version of the attitudes towards oocyte donation scale (Skoog-Svanberg et al., 2003) were used to provide a baseline measurement of women’s attitudes and intentions towards oocyte donation for treatment. These subsections were the components of the TPB, specifically, ‘attitudes towards oocyte donation’ (five items, \(\alpha = 0.57\)) was one of the two ‘attitudes’ components of the TPB that assessed positive or negative judgements about oocyte donation (sample item: oocyte donation is a good way to help childless couples). Whereas, ‘attitudes towards the consequence of oocyte donation’ (seven items, \(\alpha = 0.71\)) measured beliefs about the personal and social consequences of donating oocytes and was the second ‘attitudes’ component of the TPB (sample item: would you be happy about helping a couple that is unable to have children by other means). ‘Subjective norms’ (one item) assessed social support in deciding to donate oocytes (item: the important people in my life would support my decision to donate oocytes) and ‘perceived behavioural control’ (one item) measured the extent to which a woman feels she can donate her oocytes (item: it is entirely up to me whether or not I want to donate an oocyte). Finally, ‘Intention to donate’ (one item) measured behavioural intentions and all participants were informed of the removal of donor anonymity (item: could you see yourself donating oocytes at some point in the future). Further, an additional item was included that measured the perceived importance of genetic ties between parent and child (item: the genetic link between parent and child is important). After completing the pre-measurements, participants read either a gain- or loss-framed messages and completed four questions on their attitudes and intentions to donate after message exposure (four items, \(\alpha = 0.64; \) sample item: reading this message has influenced my feelings about oocyte donation). The gain-framed message highlighted the benefits for the associated with being an oocyte donor for the recipients, whereas the loss-framed message highlighted the cost associated with not being an oocyte donor for the recipients (please see below for the gain- and loss-framed section of the message). The framed messages were developed after reviewing a number of recent examples of successful framed messages (e.g. O’Connor et al., 2005; Brunton, 2007; Chang, 2007; Reinhart et al., 2007). The respondents rated each item using a 10 point scale of agreement with higher scores indicating positive attitudes.

#### Gain frame

Women who receive donated eggs can increase their chances of conceiving by up to 50% and women over the age of 40 are five times more likely to conceive using a donor egg. It is estimated that for every woman who donates her eggs, up to 10 families can be treated. Egg donation therefore allows childless couples the opportunity to fulfill their dreams of parenthood and this significantly increases their quality of life.

#### Loss frame

Women who do not receive donated eggs can decrease their chances of conceiving by 50% using their own eggs and women over the age of 40 are five times less likely to conceive compared with women using an egg donor.
10 families can be denied the opportunity for treatment. By not receiving egg donation, childless couples are denied the opportunity to fulfill their dreams of parenthood and this significantly decreases their quality of life.

Participants
A total of 416 women aged between 18 and 53 years participated in the study online. However, since only young women are eligible as oocyte donors (35 is the usual upper age limit) and there were only a handful of participants who were over the age of 35, this paper will only report the data on women aged between 18 and 35 years (n = 406). The mean age of the 406 participants was 22.0 (SD = 2.9) years old. Over half of the participants were from Britain (61.1%); however, the exact ethnicity of participants is unknown, although previous research have found that nearly 90% of the British women who completed online oocyte donation surveys were White (Purewal and van den Akker, 2009b, c). The remaining sample was non-British (36.9%) and of these, the overwhelming majority (91.6%) were from South East Asia (specifically Malaysia). As the sample was young, unsurprisingly the majority of the participants were single (72.4%) and had no children (97.8%). Most reported no previous miscarriages (99.3%) or terminations (96.3%). Only one participant (0.2%) reported an infertility diagnosis and four participants (1%) reported their partner had an infertility diagnosis. The response rate was unknown and no information was available on non-responders.

Procedure
The study was developed online. Participants were allocated to either a gain frame or loss frame condition. Participants were recruited using a number of different methods that included the snowballing technique; using Internet social forums and sending out an email inviting students at a local university to participate in the study. A total of four contacts of South East Asian ethnic background were used to collect data using the snowballing technique. Ethical approval was granted by the university ethics committee.

Data analyses
Chi-square tests were performed to compare demographic data between women in the gain and loss condition and British and South East Asian participants. t-tests were performed to compare differences between participants on the subsections of attitudes towards oocyte donation scale. An analysis of covariance (ANCOVA) was conducted with post-message intentions as the dependent factor, message framing serving as the between subject factor, and participant’s pre-attitudes and intentions as the covariate. A P-value of <0.05 was considered as statistically significant. Finally, structural equation modelling (SEM) analyses were conducted for the gain and loss conditions in attempts to establish how the different framed messages influenced post-message exposure intentions. SEM analyses were performed on AMOS 7.0. A number of different models were tested and the final model was selected using overall model fit indices, such as the chi-square value, the goodness-of-fit index (GFI), comparative fit index (CFI), normed fit index (NFI), root mean square residual (RMSEA), the modification indices and the distribution of residuals. An adequate model is indicative when the GFI value is close to 1.00, CFI and NFI are >0.95 and RMSEA value is <0.05 (Byrne, 2001).

Results
Socio-demographic comparisons
There were 211 participants in the gain condition and 195 in the loss condition. There were no significant differences between the gain and loss participants in age (t(404) = 1.41; P > 0.05), ethnicity (χ² = 1.6, d.f. = 2, P > 0.05), parity (χ² = 0.2, d.f. = 1, P > 0.05), marital status (χ² = 1.9, d.f. = 1, P > 0.05), miscarriages (χ² = 0.4, d.f. = 1, P > 0.05) or terminations (χ² = 0.01, d.f. = 1, P > 0.05) (see Table I). British and South East Asian participants were also compared on socio-demographic characteristics and analyses revealed that there were no significant differences between the groups in age, parity, marital status, miscarriages and terminations.

Attitudes towards oocyte donation
Women’s scores on the subsections of attitudes towards oocyte donation scale were taken before exposure to the framed messages. Results obtained revealed that the majority of the participants from the gain and loss conditions did not report an intention to donate their oocytes (77.8% reported they would not consider donating their oocytes) and there were no significant differences between the framing groups (t = −0.47, d.f. = 404, P > 0.05). Participants in the gain and loss conditions also did not differ in their ‘attitudes towards oocyte donation’ (t = −0.16, d.f. = 404, P > 0.05); ‘attitudes towards the consequences of oocyte donation’ (t = 1.17, d.f. = 404, P > 0.05); ‘perceived behavioural control’ (t = −1.0, d.f. = 404, P > 0.05) and ‘subjective norms’ (t = −1.38, d.f. = 404, P > 0.01). t-test analyses were also conducted with respondents from British and South East Asian backgrounds. Results obtained revealed that ‘perceived behavioural control’ distinguished between British and South East Asians (t = 3.26, d.f. = 404, P < 0.01). South East Asian women (M = 6.8, SD = 2.8) were significantly more likely to report lower levels of ‘perceived behavioural control’ than the British women (M = 7.7, SD = 2.3). No ethnic differences were found relating to pre-intentions and other subsections of the scale.

Framing effect
Participants in the gain-framed condition (M = 23.7, SD = 6.7) were significantly more likely to report higher post-message intentions to donate oocytes for treatment after exposure to the gain-framed message in comparison to participants in the loss condition (M = 22.1, SD = 6.5) (t = −2.47, d.f. = 404, P < 0.01) (see Fig. 1). As shown before, there were no significant differences between gain

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gain condition</th>
<th>Loss condition</th>
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<tbody>
<tr>
<td>n</td>
<td>211</td>
<td>195</td>
</tr>
<tr>
<td>Mean age</td>
<td>22.2 (SD = 3.1)</td>
<td>21.8 (SD = 2.7)</td>
</tr>
<tr>
<td>Ethnicity (%)</td>
<td></td>
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<tr>
<td>British</td>
<td>61.1</td>
<td>65.1</td>
</tr>
<tr>
<td>Asian</td>
<td>38.9</td>
<td>34.9</td>
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<tr>
<td>Nulliparous (%)</td>
<td></td>
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<tr>
<td>Marital status (single)</td>
<td></td>
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<tr>
<td>75.4</td>
<td>62.2</td>
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<tr>
<td>Miscarriages (% with at least one miscarriage)</td>
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<tr>
<td>0.5</td>
<td>1.0</td>
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<tr>
<td>Terminations (% with at least one past termination)</td>
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<td>3.8</td>
<td>3.6</td>
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Table I Socio-demographic variables
and loss frame participants in their pre-intentions to donate oocytes ($t = -0.47$, d.f. = 404, $P > 0.05$). In addition, an ANCOVA also found a main effect for framing ($F(1, 402) = 6.3$, $P < 0.01$) after controlling for existing attitudes towards oocyte donation and pre-intentions to donate.

However, separate group analyses were also run for South East Asian and British participants. Results obtained demonstrated that British participants were significantly more likely to report higher post-intentions to donate oocytes after exposure to the gain-framed message ($M = 24.2$, SD = 6.2) than participants in the loss framed ($M = 22.1$, SD = 6.8), even after controlling for existing attitudes towards oocyte donation and pre-intentions ($F(1, 252) = 8.1$, $P < 0.005$). However, the framing effect was not demonstrated in South East Asian participants when analysed separately ($F(1, 146) = .45$, $P > 0.05$). So, South East Asian participants did not score any differently in the gain ($M = 22.8$, SD = 7.3) or loss conditions ($M = 22.0$, SD = 6.0).

**SEM summary**

Multiple group analyses were conducted using SEM for the gain and loss conditions in attempts to establish how the different framed messages influenced post-message intentions. Separate SEM analyses on British and South East Asian groups were not conducted because of the small number of participants (Byrne, 2001). Figure 2A and B present the structural equation model for gain and loss frame effects, respectively.

**Gain frames**

According to the gain condition model, past ‘terminations’ ($\beta = 2.07$, $P < 0.01$) and high levels of ‘Subjective norms’ ($\beta = 0.50$, $P < 0.001$) predicted pre-intentions to donate. Pre-intentions were also related to post-message intentions ($\beta = 0.58$, $P < 0.05$) (and post-intentions also predicted pre-intentions, $\beta = -0.07$, $P < 0.05$). Further, lower levels of ‘perceived behavioural control’ ($\beta = -0.420$, $P < 0.03$) and positive attitudes towards ‘the importance of genetic ties between parent and child’ ($\beta = 0.70$, $P < 0.001$) were also direct predictors of post-intentions. The covariances between ‘terminations’, ‘subjective norms’, ‘perceived behavioural control’ and attitudes towards ‘importance of genetic ties’ are all reported in Fig. 2A.

**Loss frames**

The loss-framed SEM model however revealed a different picture. Specifically, according to the loss model, past ‘terminations’ ($\beta = 2.27$, $P < 0.01$) and high levels of ‘Subjective norms’ ($\beta = 0.58$, $P < 0.001$) remained significant predictors of pre-intentions. However, there no longer remained any significant association between pre-intentions ($\beta = 0.11$, $P > 0.05$) and post-message intentions ($\beta = -0.1$, $P > 0.05$). Further, ‘perceived behavioural control’ ($\beta = 0.22$, $P > 0.05$) and attitudes towards ‘the importance of genetic ties between parent and child’ ($\beta = 0.23$, $P > 0.05$) were also no longer predictors of post-intentions. As can be seen from Fig. 2A and B, a notable change in the structural model is the direction of the association between ‘perceived behavioural control’ and post-message intentions. In the gain frame, lower levels of ‘perceived behavioural control’ predicted post-intentions to donate. Whereas, in the loss frame, there was no significant relationship and the direction of the association was positive. So unlike the gain condition, the loss frames did not change low scores into positive scores. Once again, the covariances between variables are all reported in Fig. 2B.

The model was well-fitting across the two different framing conditions. The overall fit of the model was good, with $\chi^2 = 6.71$ (d.f. = 6, $P = .35$) and fit indices of 0.99 for GFI, 0.99 for CFI, 0.97 for NFI and 0.02 for RMSEA. Models including other sociodemographic variables and other subsections of the questionnaire did not yield good fits.

**Discussion**

**Summary of findings**

The findings obtained from this study supports the framing effect, as found by previous reports (Rothman et al., 1993; Banks et al., 1995; Block and Keller, 1995; Rothman and Salovey, 1997; Robberson and
Roger, 1988; Detweiler et al., 1999; Bannon and Schwartz, 2006; De Martino et al., 2006; Sherman et al., 2006; Chang, 2007; Maule and Villejoubert, 2007). Results demonstrated that the gain-framed message was more persuasive in promoting oocyte donation than loss framed, even after controlling for existing attitudes and intentions, and these results are consistent with Reinhart et al.’s (2007) work on organ donation. However, results also revealed that the framing effect was only observed in British participants and not in South East Asians. Likewise, Brunton (2007) found Māori and Pacific Island women in New Zealand were not motivated by either the gain- or loss-framed messages for breast cancer screening compared with European New Zealand women. Brunton had also conducted some focus groups and found that Māori and Pacific Island women perceived the framed messages (gain and loss) as too individualistic, which failed to recognize their collectivistic culture, and these reasons marked the messages ineffectiveness. It is possible that the same might apply here and the content of the messages failed to make a connection with the South East Asian women because the messages did not recognize important ethnic differences.

SEM was also utilized and results revealed that past terminations and subjective norms significantly predicted pre-intentions (before frame messages exposure) to donate oocytes. However, perceived behavioural control directly influenced the framing effect. Specifically, perceived behavioural control was inversely related to post-intentions in the gain (but not loss) frame condition. In other words, the gain frames were more influential in promoting post-intentions with participants with low levels of behavioural control. Positive attitudes towards

![Figure 2](https://academic.oup.com/humrep/article-abstract/24/12/3136/647793)
the importance of genetic ties between parent and child and pre-intentions to donate also significantly predicted post-message exposure intentions in the gain frame but not in the loss frame. Subjective norms and terminations only predicted pre-intentions and had no direct influence on post-intentions. Past researchers have also noted that a significant relationship between past terminations and oocyte donation (Klock et al., 1998; 1999; Kalfoglou and Gittelsohn, 2000; Jordan et al., 2004) and Klock et al. (1999) reported that clinically, many women who had a previous termination reported that the oocyte donation helped them compensate for the loss of a pregnancy through abortion, with the creation of a pregnancy through oocyte donation. However, it is important to note that these studies (including this study) are reporting an association between reproductive traumas and oocyte donation and not cause and effect. Further, subjective norms in this study referred to social support in deciding to donate oocytes and women who believed they would be supported were more likely to report pre-intentions to donate than women who feel they would not be supported. These findings are revealing and link in well to others studies that have also found that support from significant others appears to be paramount in the decision to donate oocytes (Weil et al., 1994; Söderström-Antila, 1995; Byrd et al., 2002; Jordan et al., 2004; Yee et al., 2007).

Attitudes towards oocyte donation, importance of genetic ties and the framing effect

The direct influence of perceived behavioural control on frames and post-intentions contradicts some reports from previous studies. Perceived behavioural control refers to people’s appraisals of their ability to perform a behaviour and according to Ajzen (2002), it is comparable to self-efficacy. Sherman et al. (2006) examined the mediating role of self-efficacy to the relationship between framing and other health behaviours. Through SEM analyses they found that higher levels of perceived efficacy influenced intentions and behaviour in the framing conditions. Further, Webb and Sheeran (2006) conducted a meta-analysis on studies that have used an intervention design and found that perceived behavioural control moderated the intention–behaviour relationship. They found that participants with high levels of perceived behavioural control were more likely to report changes in their intentions post-intervention than participants with low levels of behavioural control. However, the opposite effect was observed in this study. Our study found that lower scores of perceived behavioural control significantly predicted post-intentions to donate in the gain condition. That is, highlighting the benefits of being an oocyte donor is more effective with women with low levels of behavioural control. It is possible that in the context of oocyte donation, low behavioural control is associated with persuadable behavioural intentions. Thus, it is possible to influence women with low control through messages that highlight the personal and social benefits of being an oocyte donor, because perhaps these messages empower them. However, women with existing high reproductive control may be more difficult to persuade because the decision to donate is theirs to make and they have decided not to become oocyte donors. However, the ability of low perceived behavioural control to predict intentions is consistent with some other research. For example, Bunce and Birdi (1998) applied the TPB to predict young doctors (with low levels of perceived behavioural control) and experienced doctors (with high levels of perceived behavioural control) intentions to request an autopsy. They found perceived behavioural control predicted intentions to request an autopsy among young doctors but not experienced doctors.

The SEM analyses also revealed that positive attitudes towards the importance of genetic ties between parent and child significantly predicted post-message exposure intentions in the gain (but not in the loss) condition. These results are interesting and conflict with other data that have suggested that believing in the relative unimportance of genetic ties is associated with donation intentions in the general population (Skoog-Svanberg et al., 2003; Purewal and van den Akker, 2006, 2009b, c) and oocyte donor populations (e.g. Weil et al., 1994; Ahuja et al., 1998; Beatens et al., 2000; Byrd et al., 2002; Kirkman, 2003; Winter and Daniluk, 2004). It is possible that participants were mistaking genetic for biologic connections. For example, Boden et al. (2002) noted that many people have limited understanding of genetics. So, participants may have confused genetic ties with biologic-gestational ties (which are achieved through oocyte donation). Thus, for those participants who value biological ties, the gain-framed message may have elevated these beliefs to such an extent that they became significant predictors of post-message intentions. Alternatively, it is also possible that the participants were valuing the genetic ties between the child and father (which would remain in the oocyte donation) as opposed to other methods of having children, such as adoption where there are no genetic connections between the parents and child. These are only speculative comments and clearly more research is needed to investigate these issues.

Further, although ANCOVA supported the framing effect even after controlling for pre-intentions, the SEM found that pre-intentions predicted post-intentions. According to the SEM (but not ANCOVA statistics) gain-framed messages may not necessarily change the intentions of women who do not report pre-intentions towards oocyte donation. However, clearly more research is needed to explain these contradictions and to recognize the underlying psychological mechanisms that operate in the framing effect in relation to the TPB and attitudes towards genetic ties in the oocyte donation.

There are some limitations to this study that must be acknowledged. First, no control group (i.e. participants who were exposed to no messages) was used in this study, although the gain and loss conditions work as a control group against the other. However, with no independent control group, it is only possible to assert that gain frame messages are more effective than loss frame messages but it cannot be asserted that the framing effect was observed. Further, this study only measured intentions to perform a behaviour and not actual behaviour. Therefore, there is scope for further improvement and future research is needed to explore whether interventions based upon the framing principle can actually affect behaviour and the recruitment of oocyte donors.

Despite the limitations identified in this study, findings obtained from this study suggest that campaigns could consider using gain-framed messages. However, results also found that South East Asian participants did not respond positively to the gain frame condition compared with British participants. Past research has suggested that the framing effect is possible with women from non-White ethnic backgrounds if they account for important ethnic and cultural differences (Brunton, 2007). Furthermore, message frames could be
matched to the target populations’ perceived level of behavioural control. For example, this study found that the South East Asian women were significantly more likely to report lower levels of perceived behavioural control than the British women; however, there were no significant differences in pre-message intentions. Moreover, Purewal and van den Akker (2006) also found that the South Asian women were significantly more likely to report low levels of perceived behavioural control and intentions to donate oocytes in comparison to the White British women. Therefore, campaign targeting South East Asian and South Asian women to promote oocyte donation could consider employing the gain-framed message, which accommodates their cultural and ethnic beliefs. These results are poignant as there is an acute shortage of donated oocytes from women in Asian communities in Britain (Murray and Golombok, 2000).

Conclusion

This study aimed to provide some evidence from psychological research to help recruiting clinics in shaping their successful campaigns. Results revealed that the framing effect may be a useful guiding framework to consider in the development of campaigns aimed at raising awareness of oocyte donation. In particular, the gain-framed message appears to be more successful at changing intentions towards oocyte donation than loss-framed messages among women with low levels of perceived behavioural control and positive attitudes towards the importance of genetic ties between parent and child.

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