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Sawang-sinawang: Focusing Illusion in Disability Context

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Abstract

In predicting the future (future forecasting), individuals tend to overestimate the impact they might experience if there is a significant change in one aspect of their life. This study seeks to determine the best strategy to reduce the focusing illusion that occurs when participants are asked to imagine a worse situation (disability setting). This study is a quantitative randomized controlled trial (RCT), comparing three defocusing illusion scenarios (concrete events, change for better and worse and time-weighted) and the effect on the level of quality of life (QoL) of the participants. The results of this study showed a significant effect between the three treatments on the quality of life. The 'change for the better and worse' scenario is shown to be more effective at reducing the effect of the focusing illusion.

Keywords: disability, future forecasting, focusing illusion, defocusing illusion

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1. Introduction

In the planning process, individuals make predictions about the future. Not only about a series of events, but also predicting the feelings that are likely to be experienced in a predicted event. Predicting how individuals perceive future events plays an important role in the decision-making process (Gilbert, 2007). However, individuals tend to misjudge their own feelings, overestimate their duration and reactions to joyful and sad events. Mistakes in predicting feelings in this case called hedonic misprediction, when individuals over-predict that things that are fun and bring pleasure will increase happiness. In fact, the intensity and duration of feelings experienced when the event actually happened was not much different from the initial conditions. This is because humans have an adaptation mechanism to restore feelings to their original state (baseline). Kahneman, Krueger, Schkade, Schwarz, & Stone (2006) found that there was no significant difference in the level of quality of life between low and high income individuals, especially in the long term. This proves that participants tend to focus on

one aspect (financial well-being), and overly predict that money will bring happiness when in reality this is not always the case.

The “gap” between the feeling that is predicted to occur and the feeling that is actually experienced is caused by a bias that affects the projection of individual feelings. Kahneman et al., (2006) argued that the focusing illusion was one of the factors causing bias which resulted in a gap between predicted feelings and actual feelings. Focusing illusion occurs when an individual views a situation from a narrow point of view, causing misprediction to the feeling when the situation occurs.

Focusing illusion also occurs when an individual imagines and predicts his/her feelings when experiencing a bad situation. In predicting a bad event, individuals generally recover from grief in a much faster time than expected. In general, participants who are asked to predict quality of life when experiencing chronic disease imagine that they will be in a miserable and sorrowful situation with a low level of quality of life (Lacey et al., 2008). However, studies with chronic disease patients reported that their quality of life was significantly better than public estimates. For example, Sackett and Torrance (1978) measured the quality of life (QoL) of renal failure patients receiving hemodialysis treatment found that the general population estimated patients’ QoL as 0,39 (on a scale where 0 indicates a condition as bad as death and 1 indicates perfect health on the Health-Related scale Quality of Life), whereas kidney failure patients rated their QoL at 0,56. Boyd, Sutherland, Heasman, Tritchler, & Cummings (1990) found that regular participants predicted QoL as colostomy patients at 0.80, whereas colostomy patients rated their own QoL at 0.92. Again, the focusing illusion bias causes individuals to disproportionately anticipate future events, exaggerate and focus on things that might change while ignoring things that will remain the same.

One strategy to minimize the gap between predictions of feelings and actual feelings is by defocusing illusions, or changing the focus point of individual attention when imagining future events (Ubel, Loewenstein, & Jepson, 2005). In the focusing illusion scenario, individuals tend to pay attention to the specific yet abstract domain of their life (e.g. health, education, work, social), as if changes in one aspect of life would have a major impact on other aspects of life. In a defocusing illusion scenario, individuals pay attention to everyday details (e.g. reading, chatting with friends, paying taxes) so that they realize that the changes that occur have little impact on their lives as a whole (Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000). Ubel, Loewenstein, and Jepson (2005) conducted an experiment that positioned participants to imagine themselves to be a person with a disability through a series of vignettes and QoL ratings. In the first stage, participants were asked to rate general aspects of their life (focusing illusion), and

in the next stage participants were asked to rate daily details (defocusing illusion). This study intends to replicate the experiment to see whether participants can better predict their feelings if the focusing illusion is minimized by defocusing the illusion task. The result of the original experiment was non-significant, therefore this current experiment aim to confirm the result, specifically in Indonesia context. In addition, by knowing the predictions of feelings of living with disability, researchers will better understand how individuals perceive disability issues in the personal level.

2. Literature Review

2.1. Focusing Illusion

Focusing illusion is a condition in which an individual wrongly foretell his feelings when facing a situation that has the potential to change aspects of his/her life. Focusing illusion happens because individuals focus to a narrow perspective on a situation; therefore it seems that their entire life will be greatly affected by this one aspect (Strack et al., 1988). In this experiment, the predictions of individual feelings are obscured by a disproportionate point of view/focus, resulting in predictions that tend to be exaggerated. Ubel, Loewenstein, and Jepson (2005) formulated the following types of focusing illusions: (1) falsely estimating the emotional impact of a situation by focusing too narrowly on the difference between the status quo and the imagined situation. (2) Focus on specific changes here and now, while ignoring other aspects that are likely to affect the feelings at other times. (3) Failure to adequately consider adaptability is the third type of focusing illusion. Focusing too much on the immediate emotional impact of changing circumstances, will lead to underestimate how the feelings would changed over time. This is because human adaptability includes dynamically changing attention over time.

2.2. Hedonic Mispredictions

People generally predict that they will feel very happy if they have lots of money. However, a number of experiments have proven otherwise, that there is no significant difference in the level of happiness and QoL between the rich and the poor (see Kahneman et al., 2006). This prediction error is motivated by hedonic misprediction, with three types as follows: (1) Intensity bias occurs when people overestimate the direct emotional impact of certain events (Buehler & McFarland, 2001). For example,

students predicted that receiving a lower than expected grade on an exam would cause a much greater disappointment than they actually felt when they received that grade, (2) Duration bias, in contrast, focuses not on misperceptions of the immediate responses to circumstances, but on the miscalculation of how long and strong their emotional reactions will be (D. T. Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998). People get excited when their football team wins a game but misjudges how quickly such excitement will fade, (3) The next bias is immune neglect, or the tendency to underestimate the ability to cope with negative emotions (Gilbert et al., 1998). For example, when receiving negative comments, individuals will quickly carry out an active process to change their emotions back to their original state. Generally, individuals will return to their original emotions faster when experiencing negative events than positive events. Thus the term immune neglect refers to failure to predict greater feelings in negative events than positive ones because it ignores the active process of freeing oneself from negative emotions.

2.3. Quality of life and disability

WHO defines Quality of Life (QoL) as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, hopes, standards and problems. It is a broad concept that is influenced in complex ways by physical health, psychological state, personal beliefs, social relationships and the connection to important features of the environment (World Health Organization Division of Mental Health and Prevention of Substance Abuse, 1997). Quality of life includes the extent to which an individual is healthy, comfortable, and able to participate in or enjoy life's events. The term quality of life is ambiguous, because it can refer to the experience that the individual feels about life and is related to the conditions of life in which the individual lives. The dimensions of quality of life cover several aspects of life as follows: (1) Physical health, including energy and weakness, pain and discomfort, sleep and rest, energy, and fatigue. (2) Psychological, including body image and appearance, negative feelings, positive feelings, self-esteem, thought processes, learning, memory, and concentration. (3) The level of independence, including mobility, daily activities, dependence on medication and medical aids, work capacity. (4) Social relations, including personal relationships, social support, and social activities. (5) Environment, includes sources of income, freedom, physical safety and security, health and social services: accessibility and quality, home environment, participation

and opportunities to carry out recreational activities, environment (pollution / noise / traffic / climate), and transportation. (6) Spirituality, religion, belief.

In the perspective of persons with disabilities, non-disabled people believe that the quality of life for persons with disabilities is very low. However, in fact, when persons with disabilities reported their own quality of life, their quality of life scores were only slightly lower than predicted by non- disabled people (Amundson, 2010). For non-disabled people, conditions of disability will be the focus of attention, thus predicting very low score of the quality of life. In fact, people with disabilities have adapted to the physical conditions and facilities in their environment.

3. Method

3.1. Research Design

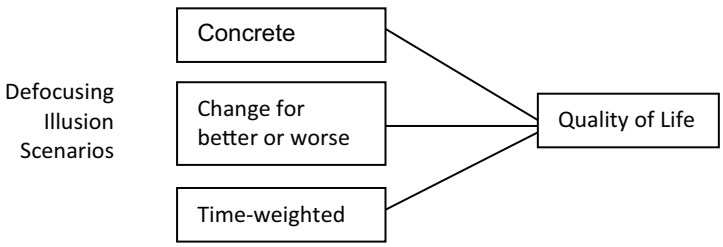

Figure 1: Experimental design

This research is an experimental study with a between-subjects randomized controlled trial design, in which the researcher compares three different treatment scenarios in three different groups. The variables measured in this experiment were 3 kinds of defocusing illusion techniques (concrete event, time-weighted, and change for better or worse) as the X variable (independent) and quality of life as the Y variable (dependent).

This experiment was adapted and modified from the research design of Ubel, Loewenstein, and Jepson (2005). Participants in this experiment were undergraduate students with no disabilities (non-disabled) who were recruited using the random sampling method because the student population was assumed to have homogeneous characteristics (Yusainy, 2016). Based on the calculation of G*Power v. 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007), the minimum sample size for the independent sample t-test is N $\geq$ 102 (medium effect: d = 0.50) to 620 (small effect: d = 0.20) with alpha level 0.05 and power 0.80. In this experiment, with the medium effect, the number of samples was 196 respondents which randomized into three groups using randomizer. First of all, the participants were randomly collected through filling an online form that

was published in social media. Initially, 209 participants was collected and randomized using randomizer into three experimental scenarios. After eliminating the incomplete responses and experimental attritions, the final 196 participants were obtained.

3.2. Research Instruments

1. Focusing illusion scenario

   The focusing illusion scenario was adapted from a scenario constructed by Ubel, Loewenstein, and Jepson (2005). Through this scenario, participants were asked to imagine becoming a person with a permanent disability.

2. Defocusing illusion scenario

   The defocusing illusion scenario was adapted from Ubel, Loewenstein, and Jepson (2005). There are 3 types of defocussing illusion scenarios, namely concrete event, time-weighted, and change for better or worse. The scenarios were delivered to the participants via online Survey Monkey. To control demand characteristics bias of the participants, not all of the objectives of the study was disclosed to the participants. It was stated in the opening of the scenario that the aim of the study is to see the disability perspective of society in general. To avoid double filling the scenario, participants were randomized into three groups with randomizer. The randomizer automatically assigned participants into three groups, then the researcher sent the link of the scenarios to the participants according to which group they belong to (concrete events N=72, time-weighted N=70, change for better or worse N=68).

   (a) Concrete Event

   In this scenario, participants were asked to imagine having a sudden accident that makes them permanently disabled. Then the participants filled out 8 statement items in the range of 7 points (1 = much worse than now and 7 = much better than now) to measure how badly the condition of the disability affected routine activities in their lives. These daily routine activities include “Visiting with friends and family”, “Paying bills and taxes”, “Vacations and traveling”, “Getting stuck in traffic”, “Physical recreational activities”, “Arguing with family and or friends ”,“ Reading and watching TV/movies”, “Overcoming death or illness in the family”. All of the activities were a concrete events or simple mundane daily activities.

   (b) Time-weighted

In this scenario the participants were asked to think about and write down the 5 activities that took the most time yesterday. Furthermore, the participants imagined having a sudden accident that made them permanently disabled. Then the participants gave a rating in the range of 7 points (1 = much worse than now and 7 = much better than now) on 5 activities that have been written previously.

(c) Change for better or worse

In this scenario, participants were asked to imagine experiencing a sudden accident that made them permanently disabled. Next, participants were asked to write down 3 aspects in life that got worse, 3 aspects in life that did not change, and 3 aspects in life that got better in the condition of permanent disability.

3. Quality of life rating

The scale consisting of one statement that was adapted from Ubel, Loewenstein, and Jepson (2005), where participants were asked to give a quality of life rating in the range 0-100 points (0 = very bad (as death) and 100 = very good (perfect health). The higher the score, the better the participant's quality of life.

All experimental procedures were presented online via Survey Monkey. The researcher constructed three sets of defocusing illusion questionnaires in three different links of surveys. First, the researcher performed trans-adaptation with translate and back translate procedures for 3 kinds of defocusing illusion scenarios and a rating of QoL. After that, the researcher constructed the experimental protocol that was designed, and then developed a randomization strategy. The entire experimental protocol was tested on a limited number of respondents (pilot study) to ensure the scenario and manipulation checks were in line with the research expectations. Respondents were recruited using announcements spread through social media and then randomized into three groups via online randomizer. Each group then received different set of questionnaires and scenarios via link of Survey Monkey. One way analysis of variance (ANOVA) technique was carried out to test the scores of the three defocusing illusion scenarios to see which scenario is the most effective in reducing the focusing illusion on the level of quality of life.

4. Result and Discussion

4.1. Result

A total of 209 students accessed the online experiment link which was opened from September 15 to September 20 2020. Participants were randomly assigned to three different treatment groups, namely concrete event scenario (n = 71), time-weighted (n = 70), and change for better or worse (n = 68). After eliminating the incomplete data entry, the final number of participants was 196 (female 142, 72.4%), with a mean age of 20.58 (SD = 1.28). As many as 13.3% (n = 26) participants had families with disabilities, and as many as 82.7% (n = 167) participants stated that they had interacted directly with people with disabilities.

Before testing the hypothesis with one way ANOVA, researchers need to test assumptions to ensure that the data was normally distributed and homogeneous. Based on the normality and homogeneity test, the three defocusing illusion scenarios showed that the data were normally distributed (p> 0.05) and homogeneous (p> 0.05). Furthermore, a one-way ANOVA hypothesis was carried out to compare the effects of the defocusing illusion scenario on the quality of life score in the concrete event, time-weighted, and change for the better or worse scenario conditions. There was a significant effect on the defocusing illusion scenario on the quality of life score (p <0.001) in the three scenarios (F (2, 193) = 3.581; p = 0.030), so the Hypothesis is accepted.

Table 1: Descriptive statistics of treatment conditions on the quality of life rating

Skenario *defocusing illusion*	QoL rating	*N*
Mean concrete event (*SD*)	44,95 (23,64)	71
Mean time-weighted (*SD*)	39,59 (20,27)	70
Mean change for the better or worse (SD)	49,88 (21,48)	68

Note: Three defocusing illusion scenarios: concrete event, time-weighted, and change for better or worse. All participants (N = 196).

Based on the post hoc comparison test with the Scheffe test listed in Table 4.2 above, the mean value of the time-weighted scenario (M = 39.59, SD = 20.27) was significantly lower than the change for the better or worse scenario (M = 49.88, SD = 21.48). The concrete event scenario (M = 44.95, SD = 23.64) was not much different from the other two scenarios. This indicated that the change for the better or worse scenario was more successful in causing a defocusing illusion effect, which was indicated by the reported high QoL score. Meanwhile, the time-weighted scenario did not help much in reducing the focusing illusion effect, as evidenced by the low reported QoL rating, as seen in the following graph.

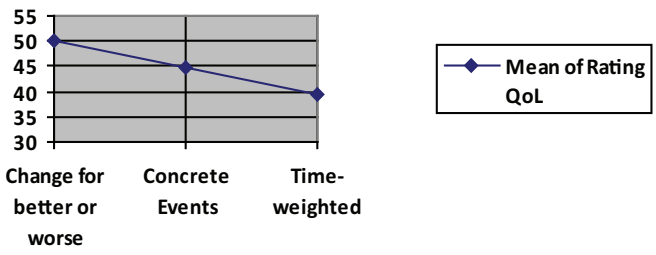

Figure 2: Defocusing illusion scenario and QoL rating

4.2. Discussion

Based on the results of hypothesis testing, the following results were obtained: First, the defocusing illusion scenario has a significant effect on the level of quality of life of the participants, so Hypothesis is accepted. This indicates that the three defocusing illusion scenarios have succeeded in reducing the focusing illusion effect. The focusing illusion effect occurs when individuals over-predict their situation. This prediction error was inflated through treatment conditions, where participants were asked to imagine being a person with a disability. Specifically, the results of the hypothesis testing showed that in the change for the better or worse scenario the participants report a higher quality of life score compared to the time-weighted and concrete event scenarios. Referring to the quality of life rating ranging from 0 (very bad, equal to death) to 100 (very good, perfectly healthy), participants in the change for the better or worse scenario reported a score of 49.88 which was in the moderate category, where participants rated his state of being neither drastically decreased nor increased significantly. In the concrete event scenario, the participants reported the mean score in the low category, which was 39.59.

Hypothesis testing results showed that the change for the better or worse scenario was effective in reducing the intensity bias that generally occurs when people overestimate the direct emotional impact of certain events (Buehler & McFarland, 2001). Schade & Kahneman (1998) suggested that individuals who focus on one aspect of life tend to overestimate its impact on their overall life satisfaction. The change for the better or worse scenario was one of the defocus strategies (blurring the focus) by conditioning participants to list aspects of life that get worse, do not change, and get better if they experience a disability. The process of arranging and labelling these aspects of life helps individuals to focus on other domains of life that were not previously considered, so that they no longer focus on one thing that has the potential to lead to excessive predictive impact.

Based on the above interpretation of the scores, the participants in this study considered that the hypothetical permanent disability was a significant disturbance to a few aspects of their life, whereas many other life domains are fine. So it could be concluded that the change for the better or worse scenario was quite successful in blurring the focus which resulted in inaccurate interpretations and predictions when imagining unfavourable situations, in this case conditions of disability. When determining which domains of life are better, unchanged, and worse in a change for the better or worse scenario, the individual was able to see the problem from a broader perspective therefore got a more accurate and unexaggerated in future forecasting.

This result is in line with research conducted by Kaczmarek et al. (2016) who found that the impact of the focusing illusion was greater when participants were asked about the quality of life related to physical conditions. However, when asked about his overall life satisfaction, the focusing illusion decreased. This proved that individuals tend to overestimate their feeling if they only focus on one domain that they consider important. Relevant to the research of Schade & Kahneman (1998), which concluded that when individuals are asked about their QoL, they tend to focus on one aspect only and ignore others, resulting in excessive predictions. Whereas QoL consists of many factors, not just one factor.

The low QoL score reported by participants in this study were due to participants being asked to imagine experiencing a permanent disability. This could be explained by Hofstede's (2001) theory which formulated five cultural dimensions that explained the intensity of individual behaviour in society. One of the five cultural dimensions formulated by Hofstede is the dimension of uncertainty avoidance (Hofstede, 2001). Uncertainty avoidance describes the tendency of an individual's behaviour to avoid a situation and results that are unknown or unpredictable. In the context of this study, imagining living with a disability provided a picture of a future full of uncertainty so that participants tend to avoid it and predicted negatively. Furthermore, a series of experimental research conducted by O'Brien, Kristal, Ellsworth, & Schwarz (2018) found that the focusing illusion was closely related to feelings of envy and pity. When an individual is envious of other people, he will judge that the envied person is having a very happy life. Conversely, if the individual pity others, then he will consider the pitied person is having a very miserable life. Whereas in fact, life has ups and downs and a cycle of good and bad that occurs every day so what is experienced may not be as good or bad as imagined. Relevant to this study, the disability conditioning in this study could be associated with a condition that induced pity so that participants imagined conditions that were much worse than they really are. In line with the research results

of O'Brien et al. (2018), not all defocusing illusion scenarios were able to reduce the focusing illusion effect on participants.

This study found that not all defocusing illusion scenarios were able to reduce the focusing illusion effect. As the baseline conditions of quality of life in non-disabled conditions were not measured, this study could not accurately provide information about how much the focusing illusion effect was decreased in each scenario. Future studies need to make comparisons between baseline conditions and post-treatment conditions to determine how much effect each IV has on DV. This research could be developed by comparing the level of QoL of non-disabled participants with the actual level of QoL of persons with disabilities, in order to find out how accurate (or inaccurate) the hedonic misprediction is.

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