Do Nonpatients Underestimate the Quality of Life Associated with Chronic Health Conditions because of a Focusing Illusion?

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Background. A number of studies show that the general public often estimates that the quality of life (QOL) associated with various health conditions is worse than patients say it is. These studies raise the possibility that people overestimate the impact that unfamiliar health conditions will have on their quality of life. One possible reason people overestimate this is because they are susceptible to a focusing illusion—when asked to imagine themselves in unfamiliar circumstances, people overestimate the emotional impact of those features of their life that would change. Methods. The authors surveyed members of the general public to test the hypothesis that their QOL ratings of hypothetical health conditions would be higher (indicating a better quality of life) after thinking about how the health condition would affect a broad range of life domains. Across 3 experiments, the authors varied the health conditions people were asked to consider (either paraplegia, below-the-knee amputation, or partial blindness), the life domains they were asked to consider, the response mode with which they evaluated how each health condition would affect each life domain, whether subjects rated the health condition before and after considering life domains or only after, and whether subjects rated their own current quality of life first. Results. Across 3 experiments, using 10 different questionnaire versions, only 1 instance was found in which subjects’ ratings were significantly higher after thinking about the effect of the health condition on life domains than before, and the magnitude of this increase was small. Conclusion. It could not be established that a focusing illusion contributes significantly to the discrepancy in QOL ratings of patients and nonpatients. Further research should explore other factors that could contribute to the discrepancy or other ways of testing for the influence of a focusing illusion. Key words: general public survey; utility measurement; quality of life measurement. (Med Decis Making 2001;21:190–199)

Most people unfamiliar with paraplegia would predict that it would have a significant, perhaps devastating, effect on their quality of life (QOL). Yet, many people with paraplegia say that it has a relatively small effect. In fact, in a famous study, the happiness of people 1 year after developing paraplegia was almost indistinguishable from the happiness of people 1 year after winning the lottery. Usually, on a scale from 0 (conditions as bad as death) to 1 (perfect health), the general public estimates that chronic dialysis yields a QOL of 0.39 whereas dialysis patients say it yields a QOL of 0.56, and patients without colostomies rate the QOL associated with having a colostomy at 0.80 whereas patients with colostomies rate it at 0.92. These studies raise the possibility that people overestimate the impact that unfamiliar health conditions will have on their QOL.

There are at least 2 reasons it is important to determine whether people misestimate the QOL associated with unfamiliar health conditions. First, many medical decisions require people to choose between medical alternatives that lead to different...
possible health conditions. People can evaluate these conditions only by imagining what it would be like to experience them. If people misestimate the QOL associated with unfamiliar conditions, they might make bad medical decisions. Second, current standards for cost-effectiveness measurement recommend that analysts use estimates of health state utilities (or QOL) derived from the general public rather than from patients. Any bias in public estimates of patients’ QOL could threaten the validity of cost-effectiveness analyses.

Studies show that people consistently overestimate the intensity and/or duration of the impact of negative and positive events on their well-being. For example, university faculty expect that getting or being denied tenure will affect their happiness for longer than it actually does; people expect to feel better or worse if their home team wins or loses a ball game than, in fact, they end up feeling. Although midwestern students believe they would be happier at a California university and California students believe they would be less happy at a midwestern university, no such difference is observed. People waiting for HIV test results overestimate how happy they will feel if they get favorable results and how unhappy they will feel if they get unfavorable results. Similarly, people predict that various personal and environmental events will affect their future well-being more than is reported by people experiencing those events.

Several mechanisms have been proposed for why people overestimate the hedonic impact of hypothetical events such as health conditions. One is a focusing illusion—when asked to imagine themselves in unfamiliar circumstances, people focus on what would be different and overlook what would stay the same. By attending asymmetrically to factors that would produce changes in well-being, they overestimate the magnitude of those changes. For example, California and midwestern college students specifically rated the climate as being better in California, and the degree to which they rated the climate as better predicted the degree to which they felt they would be happier in California. Their focus on climate overwhelmed consideration of other factors that contribute to QOL in California and the Midwest. Similarly, when asked to imagine how paraplegia would affect their QOL, people might focus on those activities that would be affected by paraplegia, such as walking and driving. They might not think about activities unaffected by paraplegia, such as their ability to watch television, have a good conversation, enjoy a meal, or have a satisfying family life. This inattention to broad life domains could focus people on the negative consequences of the condition.

The focusing illusion might be expected to affect QOL ratings more for some kinds of health conditions than others. Specifically, we might expect a focusing illusion to be especially prominent for conditions with effects that are striking but narrow—that is, conditions that have major effects on a few domains of life but little effect on other domains. For example, some physical disabilities do not adversely affect many life domains, such as family life and spiritual life.

If a focusing illusion does reduce the public’s estimates of the QOL associated with such health conditions, then it is possible that a “defocusing” exercise, in which people are induced to reflect upon domains that may not be affected by the condition, may lead to higher estimates. Such a defocusing effect would constitute evidence of a focusing illusion. This strategy is similar to the method used by Wilson and others, who showed that football fans were less likely to overestimate the effect of a win or loss on their happiness if they were first asked to think about how much time they would spend on other activities.

In the studies presented here, we examine whether a focusing illusion causes the general public to underestimate the QOL associated with health conditions that have narrow effects on life domains. We test this question by presenting people with defocusing exercises in which they are reminded to think about these domains and then seeing whether people’s ratings of the conditions increase.

In each of the studies presented here, we used paraplegia as one of the health conditions to be rated. We chose paraplegia for 2 reasons. First, paraplegia is a likely candidate for a condition that might produce a focusing illusion: It has such striking effects on certain life domains that members of the public might disregard unaffected domains. Second, although there are no published studies directly testing the hypothesis that the general public underestimates the QOL associated with paraplegia, there is some evidence that is consistent with this hypothesis. Research has shown that paraplegics and quadriplegics report levels of well-being similar to those of nondisabled
people; in addition, Schkade and Kahneman found that people who knew paraplegics viewed them as happier than people who did not. We did not limit our studies to paraplegia; we also studied 2 other disabilities—below-the-knee amputation (BKA) and partial blindness—to test whether our findings were generalizable.

Experiment 1

In experiment 1, we asked members of the general public to estimate the QOL associated with either paraplegia or BKA. Next, we gave subjects a defocusing exercise wherein we asked them to estimate how the health condition would affect various life domains. Finally, we asked them to rerate the condition’s QOL. This design tests whether subjects’ QOL ratings change after thinking about how the condition affects a wide range of life domains.

SUBJECTS

Subjects were prospective jurors in the Philadelphia County courthouse, where prospective jurors are selected from voter registration and driver’s license records. All subjects were recruited by announcing in the juror waiting room that anyone who filled out a survey would receive a candy bar.

QUESTIONNAIRE DESIGN

Subjects were randomized to receive descriptions of either paraplegia or BKA. Then they were asked to rate their expected QOL if they had the condition in question on a scale from 0 (conditions as bad as death) to 100 (perfect health). Next, subjects were asked to estimate how the disability would affect a wide range of life domains on a scale from 0 (no effect) to 10 (greatest possible effect). For example, How much do you think having a BKA would affect

Your overall health?
Your standard of living?
Your work?
Your love life?

Your family life?
Your social life?
The spiritual side of your life?
Your leisure activities, such as hobbies, pastimes, travel, and entertainment?

These life domains were adapted from items included in different versions of the National Longitudinal Survey. After this defocusing exercise, subjects were asked to reestimate the QOL of the disability on the 0 to 100 rating scale.

RESULTS

One hundred and five subjects completed a questionnaire. Their average age was 41.5 (SD = 12.2); average number of years of education was 14.6 (SD = 2.9); 68% were female, 42% were African American, and 57% were Caucasian.

The mean ratings for paraplegia and BKA before the defocusing exercise were 58.5 and 78.1, respectively (see Table 1). Both ratings decreased after the defocusing exercise, to 51.8 and 72.3, respectively ($P = 0.02$ and 0.01, respectively, by paired samples $t$ tests). Of the 53 subjects receiving the paraplegia questionnaire, 14 rated it lower after the defocusing exercise, 10 rated it higher, and the remainder did not change their ratings. Of the 52 receiving the BKA questionnaire, 15 rated it lower after the defocusing exercise, 3 rated it higher, and the remainder did not change their ratings.

Table 2 presents subjects’ perceptions of how the 2 health conditions would affect various life domains. The average rating, shown at the bottom of Table 2, is the mean of the 8 individual domain ratings; the internal reliability of this average rating,

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>n</th>
<th>Before Defocusing</th>
<th>After Defocusing</th>
<th>$P^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraplegia</td>
<td>53</td>
<td>58.5</td>
<td>51.8</td>
<td>0.02</td>
</tr>
<tr>
<td>Below-the-knee amputation</td>
<td>52</td>
<td>78.1</td>
<td>72.3</td>
<td>0.01</td>
</tr>
</tbody>
</table>

a. On a scale from 0 (conditions as bad as death) to 100 (perfect health).
b. By paired-samples $t$ test.
as measured by Cronbach’s alpha, was 0.92. Subjects’ average life domain ratings were strongly associated with subjects’ QOL ratings of the health conditions, both prior to defocusing \( (r = -0.45, P < 0.001) \) and after defocusing \( (r = -0.54, P < 0.001) \).

There was, however, only a small relationship between subjects’ average responses to the life domain questions and the change in their health condition ratings after the defocusing exercise (Pearson’s \( r = -0.20, P = 0.04 \))—that is, QOL estimates tended to decrease more among subjects who felt that the condition would have more effect on their lives.

We also examined whether subjects’ gender, race, age, and educational level were associated with either their initial QOL ratings or the amount of change in their ratings from before the defocusing task to afterward. Male subjects gave lower initial ratings than did females \( (60.5 \text{ vs. } 71.0, t = -1.97, P = 0.052) \); no other associations were significant (all \( P_s > 0.25 \)).

Some subjects provided written explanations of their ratings after the defocusing exercise. Some explanations supported our hypothesis. One BKA subject who increased her rating after the defocusing exercise explained, “I thought only of the physical activities that I am so active in currently, several of which would be eliminated. But the other aspects, it would not affect.” However, some who decreased their ratings after the defocusing exercise explained that it made them think more seriously about the negative consequences of the condition. As one wrote, “I did not fully consider the effects in all areas of my life, i.e. love life, spiritual life.” And another wrote, “My life, as I know it now, totally consists of being on my feet. I am always running around. When I answered the first time, I didn’t take those eight things [the life domains] into consideration.”

### Experiment 2

Contrary to our hypothesis, the mean ratings for paraplegia and BKA decreased after subjects thought about how these disabilities would affect a wide range of life domains. We performed a 2nd experiment to test 3 possible explanations for this result:

a. The 2 health states we chose for experiment 1, paraplegia and BKA, may not have been perceived as being narrow in their effects on life domains; thus, the exercise may have actually reinforced subjects’ beliefs about the far-reaching extent of their effects. To test this, in experiment 2, we added a 3rd health condition with very narrow effects on life domains—partial blindness in 1 eye that is largely correctable by eyeglasses.

b. In experiment 1, the defocusing exercise asked subjects to rate the effect of the given health condition on various domains on a scale from 0 (no effect) to 10 (greatest possible effect). This phrasing emphasizes detrimental effects of the condition, which might reinforce the focusing illusion, by focusing subjects’ attention on whatever becomes worse in each domain and not on what stays the same. To avoid this problem, in experiment 2 we phrased the defocusing exercise more neutrally. We asked subjects to rate the given health condition in various domains on a scale from 0 (worst imaginable situation) to 10 (best imaginable situation). For example, “please rate what you think your family life would be like if you had paraplegia” was followed by a scale ranging from 0 for worst imaginable family life to 10 for best imaginable family life.

c. In experiment 1, subjects were asked to rate the given health condition before and after the defocusing exercise. Most subjects did not change their rating. This may have happened because subjects anchored on their initial rating.\(^{10–12}\) Thus, even if subjects’ ratings were affected by a focusing illusion, the nature of the rating task may have precluded...
defocusing. To test this hypothesis, we asked some subjects in experiment 2 to rate the condition both before and after the defocusing exercise, as in experiment 1, and the remainder to rate it only after the exercise. If the predefocusing ratings in the former group were lower than the postdefocusing ratings in the latter, this would indicate that the former ratings were subject to a focusing illusion.

The modifications just described yielded a 2 (health condition) × 2 (pre-post) design. That is, 1 group of subjects rated paraplegia and another group rated partial blindness; and within each of these groups, half the subjects rated the condition before and after the defocusing exercise (pre-post) and the other half rated it only after the defocusing exercise (post only). All subjects in this 2 × 2 design used the revised defocusing exercise with the more neutral phrasing.

RESULTS

Two hundred and fifty-three prospective jurors completed a questionnaire. Their average age was 41.5 (SD = 12.9); their average number of years of education was 14.0 (SD = 2.5); 63% were female, 44% were African American, and 51% were Caucasian.

Table 3 shows subjects’ ratings of the 2 health conditions before and after the defocusing exercise. Again, contrary to our hypothesis, subjects’ ratings did not increase after the defocusing exercise. In fact, there were no significant differences in subjects’ ratings before and after the defocusing exercise (all Ps > 0.1).

As shown in Table 3, for both paraplegia and partial blindness the observed mean ratings among subjects who gave postdefocusing ratings only were lower than either the pre- or postdefocusing ratings among subjects who gave both. Thus, the comparisons of these groups provide no evidence either that focusing occurred in the pre-post groups or that defocusing occurred in the post-only groups. Independent sample t tests comparing the ratings of the post-only groups to the predefocusing ratings of the pre-post groups showed no significant difference among subjects rating paraplegia (t = 1.27, P = 0.20); among subjects rating partial blindness, the post-only group had lower ratings (t = 1.97, P = 0.05).

Table 3 • Health Ratings of Paraplegia and Partial Blindness before and/or after the Defocusing Exercise from Experiment 2

<table>
<thead>
<tr>
<th>Health Condition</th>
<th>n</th>
<th>Before Defocusing</th>
<th>After Defocusing</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraplegia</td>
<td>93</td>
<td>51.3</td>
<td>48.1</td>
<td>0.14</td>
</tr>
<tr>
<td>Partial blindness</td>
<td>56</td>
<td>80.5</td>
<td>80.6</td>
<td>0.95</td>
</tr>
<tr>
<td>Paraplegia</td>
<td>52</td>
<td>N/A</td>
<td>45.0</td>
<td>N/A</td>
</tr>
<tr>
<td>Partial blindness</td>
<td>52</td>
<td>N/A</td>
<td>73.7</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: N/A = not applicable.

Table 4 shows subjects’ perceptions of how the disabilities would affect various life domains. For paraplegia, the spiritual side of life was viewed as being closest to the best imaginable situation, whereas love life was viewed as being furthest from

Of those subjects rating the health state both before and after the defocusing exercise, 23 lowered their ratings of paraplegia, 12 raised them, and 58 were unchanged; 10 lowered their ratings of partial blindness, 14 raised them, and 32 were unchanged.

As in experiment 1, some subjects’ written comments supported our hypotheses about how the defocusing exercise might increase their ratings of the health conditions. One subject whose rating increased from 50 to 55 after the defocusing exercise wrote, “My family would rally around me to give me support. I believe I would choose my activities carefully because of my restrictions, and more thought would go into all my activities. My church family would also help, as well as my community family.” In contrast, 1 subject whose rating of paraplegia decreased from 50 to 40 wrote, “Once I looked at the areas affected in more detail and considered the fact that all of them would require the involvement of others, who would probably not be so limited, and whom I would be dependent on, I saw a reduction in overall quality.” And another, whose rating of paraplegia decreased from 75 to 50, wrote, “Social life, love life, etc. makes a person. And if you have paraplegia and you know you can’t be cured, then everything changes in your life. That’s something you have to think about.” And another, whose rating decreased from 70 to 50, wrote, “I changed my rating because of all the different things that it would affect that I did not consider.”

Table 4 shows subjects’ perceptions of how the disabilities would affect various life domains. For paraplegia, the spiritual side of life was viewed as being closest to the best imaginable situation, whereas love life was viewed as being furthest from
the best imaginable situation. For partial blindness, spiritual life was seen as being closest to ideal, whereas work life was felt to be furthest from ideal. As in experiment 1, average ratings were calculated as the mean of the 8 individual domain ratings; Cronbach’s alpha for this average was 0.94. Subjects’ average life domain ratings were strongly positively associated with subjects’ QOL ratings of the health conditions both prior to defocusing ($r = 0.75$, $P < 0.001$) and after ($r = 0.85$, $P < 0.001$).

Life domain ratings were only slightly associated with the change in subjects’ ratings before and after the defocusing exercise—as subjects’ average life domain ratings increased (meaning they thought the domain would still be of high quality despite the health condition in question), they became more likely to increase their QOL ratings after the defocusing exercise (Pearson’s $r = 0.18$, $P = 0.03$).

As in experiment 1, we also examined whether subjects’ gender, race, age, and educational level were associated with either their initial QOL ratings or the amount of change in their ratings from before the defocusing task to afterward. No associations were significant (all $Ps > 0.4$).

## Experiment 3

The 3 modifications we introduced in experiment 2 failed to support our hypothesis—that subjects’ estimates of the QOL of chronic disabilities would be raised by a defocusing exercise. Although a number of subjects changed their ratings in the direction we hypothesized, a larger number changed in the opposite direction. Moreover, the consistency of subjects’ ratings before and after the defocusing exercise cannot be explained by anchoring, because ratings were no higher among subjects who provided ratings only after the defocusing exercise.

We performed 1 further experiment to test several possible explanations for our failure to uncover a focusing illusion:

a. The defocusing exercises in experiments 1 and 2 presented subjects with a prespecified list of life domains. This list creates 2 possible problems. First, it may fail to remind subjects to consider ways their lives would be unaffected by the health condition in question. Subjects might focus on those activities within each domain that would be most affected or else simply assume that the disability would affect all areas of their lives. Second, some of the prespecified domains may not be as important to subjects as other life domains. By forcing subjects to think about how the disability affects these domains, we may have distracted them from other more important domains.

To see if either of these explanations account for our failure to find a focusing illusion, we presented subjects in experiment 3 with open-ended life domain questions in which they were asked to generate a list of 5 activities and pastimes important to them instead of providing them with the prespecified life domains used in previous experiments: “List five things that you do often and that contribute to your overall happiness. You can choose anything, from broad categories to specific activities.”

These subjects then rated the health condition in question and subsequently performed a defocusing exercise in which they were asked to consider the health condition’s effect on each of the 5 life domains they specified.

b. The response mode used in the defocusing exercise, even the more neutral version used in experiment 2, might still have led subjects to think mainly in terms of the detrimental effects of disabilities. Thus, in experiment 3, we adopted a bipolar response scale for subjects to use in rating what life with disability would be like in each domain, ranging from −3 (much worse than now) to 0 (unchanged) to 3 (much better than now).
c. Subjects’ final ratings of the given health condition might have been influenced by their inattention to their current QOL. For example, imagine a subject who rates paraplegia as having a QOL of 50 but then indicates in the defocusing exercise that most life domains would be unaffected by paraplegia. Assuming that this subject would rate his current QOL higher than 50, his rating of paraplegia should probably go up. However, because he has not been asked to rate his current QOL, it may not be obvious to him exactly how much it should go up. If, instead, this subject had first been asked to rate his own QOL and had rated it at 90, he might be more likely to give a final rating of paraplegia that is closer to 90 than to 50. In experiment 3, we performed a between-subjects test of this possibility by having some subjects rate their current QOL before receiving the disability description. Before providing their final ratings, these subjects were asked to consider not only their initial rating of the disability but also their current QOL rating.

The modifications just described yielded a 2 (health condition) × 2 (own rating) design. That is, 1 group of subjects rated paraplegia and another rated partial blindness; within each of these groups, half the subjects rated their own current QOL before giving their initial rating of the health condition and the other half did not. All subjects in this 2 × 2 design used the revised defocusing exercise in which they were asked to generate their own domains and rated the effect of the health condition on these domains using a bipolar response scale. Also, all subjects rated the health condition both before and after defocusing.

RESULTS

Two hundred and nine subjects completed a questionnaire. Their average age was 41.6 (SD = 12.4); their average number of years of education was 14.3 (SD = 2.6); 70% were female, 34% were African American, and 62% were Caucasian.

Table 5 shows subjects’ health ratings. There was no significant change in ratings of either paraplegia or partial blindness among subjects who were not asked to rate their own current QOL (Ps = 0.34 and 0.67, respectively). Among subjects who were asked to rate their own QOL, there was no change in ratings of paraplegia (P = 0.98). A significant increase in ratings of partial blindness was found (P = 0.019). Two things should be noted about this result, however. First, the actual magnitude of the observed mean increase in ratings was not great (2.7 points on a 0 to 100 scale). Second, even after defocusing, the mean rating of partial blindness among subjects who rated their own QOL was lower than either the mean predifocusing or postdefocusing ratings among subjects who did not rate their own QOL. This suggests that the process of rating one’s own QOL may have caused subjects to lower their ratings of partial blindness, and the defocusing exercise served only to partially alleviate this reduction.

As in experiments 1 and 2, we also examined whether subjects’ gender, race, age, and educational level were associated with either their initial QOL ratings or the amount of change in their ratings from before the defocusing task to afterward. No associations were significant (all Ps > 0.10).

Discussion

In 3 experiments, utilizing 10 separate questionnaires, we attempted to demonstrate that a focusing illusion causes the general public to underestimate the QOL associated with chronic disabilities. Our basic strategy was to present subjects with a defocusing exercise and to see whether this exercise resulted in higher QOL ratings for the given disabilities. In only 1 of the 10 groups of subjects
did we find a significant increase in ratings, which is approximately what would be expected by chance. Although some subjects provided written responses suggesting that they were influenced by a focusing illusion, on average the focusing illusion had no discernable effect on subjects’ responses.

Our overall inability to find evidence consistent with the existence of a focusing illusion can be interpreted in either of 2 ways. The 1st interpretation is that a focusing illusion does not exist—or, more precisely, that it does not influence the general public’s aggregate estimates of the QOL associated with chronic health conditions. The 2nd is that a focusing illusion does exist but that our experiments failed to detect it. Let us examine some arguments in favor of the latter interpretation.

First, we might have missed a focusing illusion because we used the wrong health conditions. For example, one cannot show that a focusing illusion is the reason for the public’s underestimation of the QOL associated with a given condition unless such an underestimation exists in the first place, and it could be that we simply happened to pick 3 conditions for which patients and the public give similar ratings. For 2 of the conditions we used—BKA and partial blindness—we have no evidence supporting a discrepancy between patient and public ratings. (Indeed, in experiment 2, and in experiment 3 among subjects who did not first rate their own QOL, mean initial ratings of partial blindness were strikingly similar to the ratings subjects in experiment 3 assigned to their own current QOL.) For the 3rd condition (paraplegia), however, this is not true. As described in the introduction, although there is no direct evidence that patients and the public rate paraplegia differently, there are studies showing that paraplegics report levels of well-being similar to those of nondisabled people and that people who know paraplegics rate them as happier than people who do not. This suggests that people who do not know paraplegics are likely to underestimate the level of well-being associated with paraplegia. (In the experiments reported herein, we asked subjects whether they knew anyone with paraplegia and replicated the findings of Schkade and Kahneman: subjects who had paraplegics as friends or family members gave higher ratings of paraplegia than either subjects who knew no paraplegics or subjects who knew paraplegics as acquaintances.) Thus, to argue that we failed to find a focusing illusion because we chose the wrong conditions, it is necessary to postulate that BKA and partial blindness were wrong for one reason and paraplegia was wrong for some other reason, which does not seem consistent with the idea that the focusing illusion has a very pervasive influence.

Second, we might have missed a focusing illusion because our sample sizes were so small that we lacked the power to detect effects. In the 8 paired-sample t tests, however, the minimum difference in mean ratings that we had an 80% power to detect (at \( P < 0.05 \)) ranged, on a 0 to 100 scale, from 7.9 (for subjects rating paraplegia in experiment 1) to 3.1 (for subjects in the “BKA/own QOL” cell in experiment 3). For independent-sample t tests, the power was lower: Minimum detectable differences ranged from 10 to 14 points. However, in both of the independent-sample comparisons, and in 5 of the 8 paired-sample comparisons, the observed mean ratings actually decreased after defocusing; and in 2 others they increased by less than 1 point on a 100-point scale. This pattern of results does not seem consistent with the idea that significant increases would have been found if more data had been collected.

Third, we might have missed a focusing illusion because our defocusing exercise was ineffective. For example, the life domains used in experiments 1 and 2 might have created their own kind of focusing illusion. Work life and social life are such broad categories that they may not remind people of all the factors within each domain that would be unaffected by the disability. For example, people who do manual labor would be affected by some of the disabilities used in this study, but many of these people might find alternative jobs that are equally fulfilling. People’s social lives may also be changed by having a disability, but not necessarily for the worse. People may have focused too much on the negative effects the disability would have on their current work life, social life, and so on, while failing to consider the ways it might improve each of these life domains. Similarly, within each category, more specific examples than the ones we used might have prompted people to think more carefully about how the disability would affect the life domain. We did not specifically ask people to think about how the disability would affect their ability to have a conversation or watch television, for example. Nevertheless, in the open-ended life domain questionnaires, many subjects listed very specific activities such as television watching, book reading, and prayer. Yet, subjects in these
questionnaire versions still, on average, did not raise their ratings after the defocusing exercise. This suggests that we are unlikely to have missed a large focusing illusion based on the defocusing exercise used in the first 2 experiments.

Overall, then, given the wide range of factors we varied across experiments, we believe the most plausible conclusion to draw is that any focusing illusion we missed would, at most, have only a small effect on people’s QOL ratings. The very high alpha coefficients of the life domain ratings in experiments 1 and 2 also suggest that little focusing took place. If people truly believed that these health conditions had narrow effects (i.e., major effect on some life domains and little effect on others), but simply forgot about the unaffected domains when they gave their QOL ratings, then when we asked subjects directly about the effect of the condition on each domain they should have responded very differently across domains, which would have resulted in low internal consistency and therefore low alphas. Instead, we found very high alphas, suggesting that people truly believed that the conditions had relatively similar effects across domains.

Although our studies do not support the idea that a focusing illusion contributes significantly to the discrepancy between nonpatients’ and patients’ estimates of the QOL associated with chronic health states, other studies have obtained results that are consistent with the existence of a focusing illusion. What could account for these seemingly contradictory results? One possibility is that the focusing illusion comes into play only for certain kinds of life events and not others. Another possibility is that the studies purporting to show a focusing illusion were in fact documenting a different phenomenon. Both of these possibilities are discussed below.

The seeming contradiction between our results and those obtained by Wilson and others6 may have resulted from the different types of life events examined in the studies. Our study examined chronic health states whereas Wilson and others examined college football team fans’ predictions of how they would feel on the days following a win or a loss by their team. As one of their studies shows, the hedonic and material impact of wins and losses is short-lived, which may explain why thinking about how they spend their time on a typical day reduced the extremeness of their hedonic predictions. In contrast, the impact of chronic disabilities, like paraplegia, is long-lived. The findings of Wilson and others, in combination with ours, suggest that a focusing illusion exists, but it may be much more pronounced (or may only occur) for certain types of situations.

The discrepancy between our findings and those of Schkade and Kahneman7 point to a subtlety of interpretation. They report 2 studies that they interpret as support for a focusing illusion. In the 1st, they found that midwestern and California college students exaggerated differences in well-being between the 2 groups of students. Moreover, consistent with the focusing illusion, students who evaluated the well-being of students in the other location tended to rate climate-related attributes as more important than those who rated their own well-being; and statistical tests indicated that these importance ratings mediated the observed discrepancy in satisfaction ratings. Second, the authors conducted an additional study in which people who knew or did not know paraplegics rated the QOL associated with paraplegia, including the frequency with which paraplegics experience good moods and bad moods, and summarized their findings as follows: “The less you know about paraplegics, the worse off you think they are.” Although the authors attribute both findings to a focusing illusion, it is possible instead that they arose from the students’ failure to predict adaptation, which is a separate phenomenon. Adaptation is an active process, or rather, a set of active processes, by which an individual alters the extent to which an event affects his or her life. People with chronic illness may adapt physically—for example, a person with blindness may learn how to read Braille and ambulate with a cane. Adaptation is also a psychological process: people adjust to disabilities by finding alternate activities they can perform, reducing their expectations of what they need to be happy, finding positive meaning in their adverse experience, and so on. Finally, even without intentional efforts to cope, the intensity of emotional response diminishes over time. In contrast to the complex and dynamic processes just described, the focusing illusion is a failure to appreciate the fact that some domains of life will remain relatively unaffected by the health conditions (e.g., failing to consider that...
paraplegia will not affect one’s ability to enjoy a good television show, a pleasant conversation, or a dinner with family and friends.

Both underprediction of adaptation and the focusing illusion would be expected to cause people to overestimate the effect that a given event would have on their overall QOL. The details of this overestimation would be expected to differ. If people understood adaptation, but were subject to a focusing illusion, they would be expected to overestimate the effect of the event by a constant amount regardless of the length of time since the event’s occurrence. Underprediction of adaptation, by contrast, might lead to accurate estimates of the event’s immediate effect but overestimates of its later effect. In the case of the midwestern and Californian college students, it is possible that students correctly assessed the short-term impact of climate on their well-being but failed to appreciate how quickly they would adapt to the difference in climate and return to their baseline level of satisfaction. Similarly, the effect of knowing paraplegics on estimates of their mood states could be interpreted as evidence that knowing paraplegics makes one better at appreciating their adaptation to the condition, including how paraplegia affects their moods. Thus, both of Schkade and Kahneman’s results are consistent with the existence of underprediction of adaptation and with a focusing illusion. Further research should clarify which factor best explains their results.

A variety of factors could contribute to discrepancies between patient and public ratings of health states. Patients physically and psychologically adapt to their illness; the general public may fail to consider such adaptation or may underestimate their own ability to adapt. Alternatively, patients may be unable or unwilling to admit how much illness has reduced their QOL. They may have even forgotten how good life used to be. These and a wide range of other potential factors should be evaluated so that clinicians and policy analysts can better understand why patients and the general public have such different views of certain illnesses. Meanwhile, the current study does not support the idea that a focusing illusion plays an important role in causing discrepancies between patient and public health state ratings.

The authors gratefully acknowledge Stacey McMorrow and Christopher Hebrank for research assistance; Ellen Wise and Julie Lucas for assistance in manuscript preparation; Daniel Kahneman, Daniel Gilbert, Timothy Wilson, and David Schkade for comments on an earlier version of this paper; and the prospective jurors who responded to our surveys.

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