FACtORS IMPORTANT FOR THE MEASUREMENT OF SOCIAL COMPARISON IN CHRONIC ILLNESS: A MIXED-METHODS STUDY

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Objectives: The aim of this study was to examine social comparison in illness using a mixed-methods approach that combined inductive exploration of how people used social comparison in this self-help group with a quantitative study of social comparison processes and their relationship to quality of life.

Methods: The qualitative study involved 15 semi-structured interviews with people with Ménière’s disease. Themes from the analysis of the interviews informed the development of the Social Comparison in Illness Scale (SCIS), which was then validated in a questionnaire study, in which participants with Ménière’s disease (n = 196) completed the SCIS, the previously validated Identification/Contrast social comparison scale, and the SF-36 health status questionnaire.

Results: The qualitative study uncovered a wide range of forms of social comparison, including upward, downward and lateral comparison on illness and coping dimensions, as well as comparing solely for informational purposes. The quantitative study indicated that these varied directions and dimensions of social comparison could be mapped onto five reliable categories that were related to quality of life: upward positive and downward positive comparison, upward negative and downward negative comparison, and comparing for information.

Discussion: These analyses highlight the complexity of socially comparing in chronic illness, but also confirm the validity of the Identification/Contrast model of social comparison in this context.

Keywords: Chronic illness, Ménière’s disease, Mixed methods, Scale development, Social comparison

INTRODUCTION

Social comparison is the process of comparing with other people (conventionally referred to as ‘targets’ in social comparison research). This is reportedly something we all engage in at some time or another, but we do so more when we experience uncertainty, e.g. when diagnosed with a chronic illness. We do this to self-evaluate, i.e. to assess how we fare relative to others, and to self-enhance, by increasing our self-esteem. Social comparison can be an important means by which people with chronic illness maintain a positive view of their situation, by focusing on dimensions on which they perceive themselves as more fortunate or successful than others.

When we compare, we do so on a ‘dimension’, i.e. a relevant aspect of the target; for example, students may compare assignment marks. In this example, the students socially compare for reassurance that they are not too inferior to their peers on the dimension in question, academic performance. In illness, social comparison may occur on the dimensions of the severity of the illness or the target’s coping success or failure. Cancer patients have previously shown a preference for the coping dimension rather than the illness severity dimension, when
comparing in an upward direction.\textsuperscript{8,9}\ Disabled people have also distinguished between these two dimensions, although this did not determine their affective response.\textsuperscript{10}

Social comparison can occur with similar targets (lateral comparison), in order to reduce feelings of anxiety and isolation when experiencing an unfamiliar situation (such as a diagnosis of a chronic illness).\textsuperscript{4} Social comparison with better-off targets (upward comparison) may provide information that can be used for self-improvement,\textsuperscript{5} while comparison with worse-off targets (downward comparison) may permit self-enhancement.\textsuperscript{11} According to Buunk’s Identification/Contrast model,\textsuperscript{12} we can experience both positive and negative affect after the comparison, depending on whether we have identified or contrasted with the target, and whether the target is better off (upward comparison) or worse off (downward comparison). For example, if we compare with someone who is better off than ourselves, we are comparing with an ‘upward’ target. If we feel that we too could be like that person, then we have identified with them and will experience a positive affect as a result. However, if we feel that we cannot never be as well off as the target, then we have contrasted with this person, and we are likely to experience a negative affect. The opposite is true for downward comparison, i.e. comparison with someone worse off than ourselves. In this case, if we feel lucky that our situation is not as bad as that of the target, then we have contrasted and will experience positive affect. On the other hand, if we feel anxious and fearful that we may be in a situation just as bad one day, then we have identified with the target and will experience negative affect.

Comparison among those with chronic conditions is a common event, as these conditions are often perceived as a threat,\textsuperscript{13} and we compare more when we perceive threat.\textsuperscript{4,14} We also do so more when the situation or illness is at its worst,\textsuperscript{13,15} and we tend to lower the comparison level when the illness is at its worst,\textsuperscript{2} meaning that we tend to compare with those worse off. For example, after initial diagnosis or onset of illness and during active stages of illness, we tend to compare with those whose illness is worse. This could be problematic, as it has been proposed that comparing over time may lead to increased identification with the worse-off target.\textsuperscript{16} This means that the individual may start to think and behave like the worse-off other unnecessarily, or at the very least prematurely. This could lead to negative affect and inappropriate illness behaviours and thoughts.

A number of studies have investigated associations between social comparison, affect and health. Downward comparison has been shown to be associated with negative affect in people with rheumatoid arthritis,\textsuperscript{17} while upward comparison was associated with more positive affect in disabled people,\textsuperscript{10} and induced hope in students.\textsuperscript{18} Higher levels of social comparison were also associated with more problems with activities of daily living and lower levels of wellbeing in elderly women\textsuperscript{19} and ex-cancer patients.\textsuperscript{8} More information on social comparison among people with chronic illness could increase our understanding of the processes involved in the wide variety of contexts that provide opportunities for comparison to occur, such as in the doctor’s waiting room, in the media, in self-help groups, and talking to family and friends about others with the same condition.

Many previous studies on social comparison in illness have used methodologies dependent on the presence of the researcher, or have used one of two questionnaires [the INCOM and the Identification/Contrast (I/C) scale, discussed below] that are not specifically illness oriented.\textsuperscript{10,17,20–22} However, social comparison in chronic illness may be different to that which occurs in other situations. For example, many other situations are short-term or are under some control by the individual (e.g. social contexts, such as, ‘are my clothes smart enough for this occasion?’ where this ‘occasion’ only lasts a few hours and the person can leave the
situation if they wish). However, in chronic illness, there is usually little control over the progression of the illness and, by definition, the illness is long-term. This may mean that comparisons may be more likely to be negative and may have more important long-term effects on the perception of quality of life. With this in mind, we sought to determine which aspects of social comparison were important to the chronically ill and so develop a scale to be used within this population.

The two validated questionnaires, the INCOM and the I/C scale, provide generic measures of social comparison. The INCOM measures individual differences and looks at the extent to which the individual socially compares. The I/C scale measures the interpretation of the comparison by asking whether the person has identified with or contrasted against upward and downward targets. However, this scale does not consider lateral comparison, where we compare with others who are similar to ourselves, even though this type of comparison is central to social comparison theory. The dimension on which we compare is also potentially important; for example, comparing with others concerning the severity of illness or ability to manage the illness might have entirely different effects.

Our aim in this study was to determine just what aspects of social comparison were important to include in a measure of social comparison occurring in chronic illness. In order to determine whether people with chronic illness who belong to a national self-help group socially compare, and if so in what way they do this, our first task was to carry out an exploratory qualitative study to determine what aspects of social comparison were prevalent among this population. These were then incorporated into a scale for use within this chronic illness population. Our second study assessed the structure, reliability and validity of the new scale and the relationship between social comparison and quality of life.

### STUDY 1

#### Methods

**Participants**

Participants were all members of the Ménieré’s Society, a national self-help group for people with Ménieré’s disease with over 5500 members. Ménieré’s disease is a chronic disorder causing severe bouts of vertigo and dizziness, intermittent tinnitus and hearing loss. This is a progressive illness, often accompanied by psychological effects such as anxiety, isolation, and depression, and eventually leaves the person partially hearing-impaired. While most of the members of this self-help group do not actually meet each other, social comparison occurs by means of their quarterly magazine, which contains a large ‘letters to the editor’ section consisting of personal stories of experiences of Ménieré’s disease.

The Ménieré’s Society invited 62 members, in the Southampton and North Hampshire area, to be interviewed. Participation was voluntary; 25 people responded positively, and 15 people (six men and nine women) with an age range from 29 to 79 years were recruited. Convenience sampling was used, whereby all those participants fulfilling the inclusion criteria, i.e. a positive diagnosis of Ménieré’s disease and living in the Southampton and North Hampshire area, were invited to be interviewed. The first 15 participants who reported that they had been diagnosed with Ménieré’s disease by an ear, nose and throat specialist were recruited (the mean time since diagnosis was 9.6 years). This number of participants was considered sufficient because the sample was quite diverse and the later interviews were yielding little new information (although we did not purposively sample people who might have given different accounts).

**Procedure**

Prior ethical approval was obtained from the University of Southampton School of
Psychology ethics committee, and all interviewees returned written informed consent before being contacted for interview. The interview schedule (see Appendix) was designed by both researchers and piloted on a member of the Society. It followed an exploratory path, starting by asking the participants if they read *Spin* and, if so, what they found helpful about it. No direct questions about social comparison were asked; instead, the participant was asked to talk about the magazine, and prompted by being asked what they found helpful or unhelpful about the magazine. All participants spontaneously mentioned socially comparing, and only once this had occurred were questions directed to enquire about how they felt after reading about others.

The interviews were recorded and transcribed anonymously. Thematic analysis was used to inductively identify the most common modes of social comparison. We wished to determine whether interviewees’ accounts of social comparison contained modes of comparison that were not already described in the literature, and so we did not seek to simply impose the pre-defined categorizations in the literature but examined the types of social comparison reported by interviewees so that new categorizations could emerge. After immersion in the transcripts, the text was initially coded to identify all statements relating to social comparison. A principal aim of this study was to identify themes that were sufficiently common to be quantitatively evaluated in the subsequent questionnaire study. Consequently, only themes mentioned by over a quarter of the sample were included. In the next stage of the analysis, statements about social comparison were then classified as positive, negative or informational, based on the interpretation of the information by the participant. As part of the inductive process, the positive theme was further subdivided into upward, downward, lateral and trajectory according to the direction of the comparison statement, in order not to overlook the finer distinctions within the theme. The interviews and coding were carried out by BD; both authors discussed and agreed on the thematic framework and categories.

### Results

The most prevalent forms of social comparison reported by interviewees are described below. The themes that emerged from the data were classified into the categories listed in Table 1.

#### Positive downward comparison

The majority (13) of the participants spontaneously described positively interpreting comparisons with people who they perceived as being in a worse situation with regard to their illness:

> And I’ve been lucky really, that it has been in remission a lot of the time. (P1)
> And there’s always somebody there worse than you, and I think ‘Well, I’ve got nothing to moan about.’ You know, it sort of picks me up a bit. (P2)
> Well it makes me put my own problems into perspective, it does, it really makes you, as I say, count your blessings and look at life as you should be looking at it (P3)

These comparisons led to positive affect, as the participants realized that they were better off on the illness dimension than they had previously believed.

#### Positive upward comparison

Positive comments were also made by 13 people about those who were perceived as...
better off with regard to the coping dimension (how to manage their illness), showing how upward comparison can also induce positive affect:

When you’re going through a bad patch you even get concerned about ‘Well, should I go on holiday, can I fly?’ And then you just pick out little pieces in the letters where people have said, you know, they’ve just come back from a holiday in Malta, for example, and you think, ‘Well if they can do it, I can still do it.’ It’s all about people giving you hope, if you like, because it [Ménière’s disease] is very debilitating. (P6)

Well because I feel if this person can do it, why can’t I do it as well… like this person from [magazine]… she travels on her own, she goes abroad quite a lot… she had vertigo… but it obviously makes me feel good that there are some strong people because you want to be strong as well. (P25)

Reading about others doing better than themselves on the coping dimension was an inspiration and helped to make them feel good about themselves as well.

Trajectory

Another theme classified as positive was labelled the ‘trajectory’ theme. Here, participants made positive comments about accounts of others who had been worse but were now better, or who had been coping badly but were now coping well. This theme emerged inductively as a part of the analysis process. It has been classified separately as, by their very nature, it is not usual with chronic illnesses to see improvement, and so it may be that stories indicating improvement give more hope to the reader than stories of people who are simply better off and where identification is unlikely:

You read letters that people say ‘I can now lead a normal life, I've had one procedure or another,’ and you think ‘well maybe if I get it [Ménière’s disease] in both ears then life is not over after all.’ (P6)

I think the most helpful letter I’ve read was one where a lady had Ménière’s since she was a child and the things that she’s managed to do, when she thought she couldn’t, but she’s overcome it, and it’s given me the encouragement that I can carry on and do things that perhaps I thought I couldn’t do anymore. (P4)

All the ‘trajectory’ comments were positive interpretations, and both the illness and the coping dimensions appeared in this category; often the beginning of the trajectory referred to worse symptoms that were later managed by better coping.

Lateral comparison

We placed all comments about stories where the person was neither better nor worse but similar to the interviewee in a category labelled ‘lateral comparison’:

And for the first time ever I’ve been able to read through that and said, yes, that’s me! Yes, yes. And he described the symptoms better than I ever could. (P6)

I like the shared experience … You can align yourself with ‘I’m … probably in exactly the same boat as that person.’ (P22)

I think it’s the reassurance that you’re not the only one with it, that is the nice thing about it, that you feel you’re not the only one. (P4)

There were no negative comments in this category, which included both the illness and the coping dimensions. The participants reported positive affect and taking comfort in knowledge that there is someone else who understands exactly what they are going through and that they are not alone in their suffering.

Negative downward comparison

Fourteen participants made comments classified as negative downward comparison, all focusing on the illness dimension. Often these comments related to anticipating the individual’s own future; they read the stories and imagined themselves in that situation some time in the future, and this brought about negative affect:

When you read the ones that people are going through a bad time at the moment, or have been going through a bad time for a long time, or its gone to both ears, or it’s… you then think, ‘Have I got that to come?’ (P7)

I suppose it’s depressing when you hear about people who perhaps, you know, suffer from quite severe vertigo for… sometimes it lasts 3 months. So, it just makes you think, ‘Oh golly, could I deteriorate and go into this sort of situation?’ (P24)
Comparison for information
A final category was comparison for information; the participant was gaining information from the story without reporting affect. Ten participants made comments in this category:

Well, I look into what they’ve done and probably try it for a few weeks. (P2)

People talk in the magazine about drop attacks. Well, I’ve never had a drop attack as such, and you see that if you were to have a drop attack you’d recognize it for what it is. (P8)

In this category, the experiences of others were helpful concerning what to try and what to avoid, and in recognizing symptoms that they have not yet experienced, so covering both the illness and the coping dimensions.

Discussion
The qualitative analysis revealed that the participants were indeed socially comparing with those described in the ‘letters to the editor’ section. Positive upward and downward and negative downward comparison were present, consistent with the I/C model. However, the analysis also suggested that additional comparison directions were common in real-life contexts. These included lateral comparison with similar others, which may reduce feelings of anxiety linked to the apparent isolation of being the only one with the illness (supporting Schachter’s Anxiety/Affiliation theory), and positive comparisons with people on a trajectory, where the person had recovered or succeeded in coping with their illness after a period of severe illness or unsuccessful coping. The trajectory theme may be important to people with chronic illness, as it may help them to make positive upward comparisons on the illness dimension through reading about how someone who was as ill as them has improved. Comparison simply for information emerged as a distinct theme that seemed to indicate a self-improvement purpose for the comparison, partly linked to self-evaluation. This may indicate a preference to receive information from fellow patients, as has been previously found in a study with newly diagnosed cancer patients who preferred to receive information about fellow patients than about cancer, radiotherapy, or coping.

A distinction between the dimensions on which social comparisons were made (i.e. illness and coping) also emerged. Both positive and negative downward categories consisted of illness-oriented statements. In contrast, the positive upward category consisted only of coping statements, confirming one of Festinger’s proposals that we prefer upward comparison on the dimension of abilities. The lateral, trajectory and informational statements contained both illness-oriented and coping-oriented dimensions. This may be because these targets are not unambiguously ‘better’ or ‘worse’, and therefore social comparison may be less threatening. These subtle variations emerging from the qualitative data suggested that there might be more complexity to social comparison in this context than is fully captured by the existing I/C questionnaire, and provided the rationale for including these additional dimensions in the questionnaire used in the next study.

Although the demographic characteristics of the sample were consistent with the characteristics of the membership of the Society, a limitation of this study was the use of a self-selecting sample. While sampling for qualitative research does not require a statistically representative sample, this volunteer sample may not have encompassed the diversity of views among people with Ménière’s disease.

STUDY 2

Methods

Scale development
To develop the Social Comparison in Illness scale (SCIS), we combined those aspects of social comparison found to be important in
the qualitative study (upward, lateral, trajectory, downward, dimensions, information) with those suggested in the existing literature (upward negative). Since the upward/downward positive and negative dimensions corresponded to the I/C scale, this was used as a guide on which to base these dimensions. However, the items were modified so that they referred specifically to comparison about illness and to reading about the targets in the self-help group magazine. Additional items were developed to measure comparison for information, lateral comparison and positive trajectory. Each comparison direction (except the information section) comprised four items to measure positive and negative affect corresponding to the two key dimensions of illness severity and coping. The complete scale comprised 20 items. Responses to all items were assessed on a five-point Likert scale ranging from strongly disagree to strongly agree.

Other measures
For the purpose of criterion validation, the SCIS was administered alongside the I/C scale, which consists of four subscales: upward negative comparison; upward positive comparison; downward negative comparison; and downward positive comparison. This scale is not illness-oriented and refers generically to ‘when I see others …’ All items are scored on a five-point Likert scale.

For the purpose of construct validity (i.e. to demonstrate that the SCIS assesses dimensions that are related to health status and quality of life), the widely used SF-36 was also administered.

Participants and procedure
A single questionnaire pack was sent out by the Ménière’s Society to 600 randomly selected (using the RAND command in EXCELL to randomly generate numbers which had been assigned to the membership numbers) members of the Society, all diagnosed with Ménière’s disease, of whom 196 responded (34% response rate). No reminders or second questionnaires were sent out. The mean age was 58 years (range 26–82 years) and 131 were women, consistent with the membership profile of the Ménière’s Society. Ethnicity was not measured in this study owing to the low numbers of ethnic minorities represented in Ménière’s disease, meaning that it would not have been possible to determine the effects of ethnicity on the interpretation of the comparison.

Results

Scale structure and reliability
Factor analysis with Varimax rotation was used to examine the internal structure of the SCIS, and revealed five principal components with Eigenvalues greater than 1 (Table 2). All items measuring positive upward comparison, positive lateral comparison and positive trajectory loaded onto one factor. All items measuring negative upward, negative trajectory and negative lateral social comparison loaded onto another factor. All the items measuring social comparison for information formed a separate third factor. All items measuring downward positive social comparison loaded onto a fourth factor. The items measuring negative downward and negative responses to both a positive trajectory and lateral social comparison loaded onto a fifth factor. The dimensions coping and disease severity did not form separate factors, but simply loaded onto the relevant factors based on the direction of the target and positive or negative interpretation of the information.

Subscales were computed from the items loading on each factor, and their internal reliability was assessed using Cronbach’s alpha. All five subscales were reliable, with a range of alpha values from 0.76 to 0.88 (Table 3).

Validity
Criterion validity was assessed by correlating the subscales of the SCIS with the subscales
TABLE 2. Factor analysis of Social Comparison in Illness Scale; factor loadings after Varimax rotation

<table>
<thead>
<tr>
<th>Subscale/Item</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive upward comparison</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>When I read the letters from people …</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… coping better, I feel inspired</td>
<td>0.68</td>
<td>-0.12</td>
<td>0.23</td>
<td>0.14</td>
<td>0.15</td>
</tr>
<tr>
<td>… with milder symptoms, I feel hopeful</td>
<td>0.71</td>
<td></td>
<td>0.18</td>
<td>0.13</td>
<td></td>
</tr>
<tr>
<td><strong>Trajectory (with positive responses)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>… who had MD badly but now is in remission, I feel hopeful</td>
<td>0.77</td>
<td>-0.29</td>
<td></td>
<td>0.14</td>
<td></td>
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<tr>
<td>… who was coping badly but now is coping well, I feel hope</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td>0.13</td>
</tr>
<tr>
<td><strong>Lateral comparison (with positive responses)</strong></td>
<td></td>
<td></td>
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<tr>
<td>… who are coping the same, I don’t feel so alone</td>
<td>0.70</td>
<td></td>
<td>0.31</td>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>… who have MD in a similar way to me, I don’t feel so alone</td>
<td>0.64</td>
<td></td>
<td>0.28</td>
<td>0.10</td>
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<tr>
<td><strong>Positive downward comparison</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… who are not coping as well, I feel lucky</td>
<td>0.27</td>
<td></td>
<td>0.11</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>… with worse symptoms, I feel lucky</td>
<td>0.23</td>
<td>-0.15</td>
<td></td>
<td>0.87</td>
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<tr>
<td><strong>Comparison for information (no emotive response)</strong></td>
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<tr>
<td>I read the letters to see …</td>
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</tr>
<tr>
<td>… if they have any advice for me</td>
<td>0.28</td>
<td>-0.15</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>… if I am coping better or worse …</td>
<td>0.23</td>
<td>0.15</td>
<td>0.68</td>
<td>0.37</td>
<td>0.13</td>
</tr>
<tr>
<td>… if I am more or less ill …</td>
<td>0.31</td>
<td>0.45</td>
<td>0.49</td>
<td>0.36</td>
<td>0.11</td>
</tr>
<tr>
<td>… medical advice in the letter …</td>
<td>0.35</td>
<td></td>
<td>0.74</td>
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<tr>
<td><strong>Negative downward comparison</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>… who are not coping as well as I am, I feel scared</td>
<td></td>
<td>0.25</td>
<td></td>
<td></td>
<td>0.83</td>
</tr>
<tr>
<td>… with worse symptoms than I, I feel ‘have I got this to come?’</td>
<td></td>
<td>0.17</td>
<td></td>
<td></td>
<td>0.88</td>
</tr>
<tr>
<td><strong>Negative upward comparison</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>… coping better I feel depressed</td>
<td>-0.19</td>
<td>0.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… with milder symptoms I feel sorry for myself</td>
<td></td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trajectory (with negative responses)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… whose symptoms were bad but now are better, I feel, ‘I am never going to be like that.’</td>
<td>-0.10</td>
<td>0.45</td>
<td>0.12</td>
<td></td>
<td>0.42</td>
</tr>
<tr>
<td>… who was coping badly and now is coping well, I feel helpless</td>
<td></td>
<td>0.62</td>
<td></td>
<td></td>
<td>0.42</td>
</tr>
<tr>
<td><strong>Lateral comparison (with negative responses)</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>… who are coping the same, I feel depressed</td>
<td></td>
<td>0.88</td>
<td></td>
<td>-0.11</td>
<td>0.11</td>
</tr>
<tr>
<td>… who have MD the same as I do, I feel depressed</td>
<td></td>
<td>0.80</td>
<td></td>
<td>-0.16</td>
<td>0.15</td>
</tr>
<tr>
<td><strong>Eigenvalues</strong></td>
<td>3.7</td>
<td>3.7</td>
<td>2.2</td>
<td>1.96</td>
<td>1.94</td>
</tr>
<tr>
<td><strong>Percentage of variance explained</strong></td>
<td>18.65</td>
<td>18.51</td>
<td>11.03</td>
<td>9.78</td>
<td>9.72</td>
</tr>
</tbody>
</table>

Factor loadings > 0.5 are highlighted in bold; correlations < 0 are represented by a dash.
Factors: 1 = upward positive comparison; 2 = upward negative comparison; 3 = comparison for information, 4 = downward positive comparison; 5 = downward negative comparison.

of the previously validated I/C scale (Table 4). As expected, the corresponding subscales showed the highest correlations, and all other patterns of intercorrelation were in the expected directions. The information subscale showed moderately significant correlations with all of the other I/C subscales, showing that some degree of information seeking was occurring with all the directions and affective responses. As a test of construct validity, we also correlated the SCIS subscales with the SF-36 (Table 5). The negative and information scales of the SCIS were negatively correlated with most of the SF-36 subscales, but the upward scales were unrelated to the SF-36.

Discussion
We found that five aspects of social comparison through the self-help group magazine were occurring in our sample of people with Ménière’s disease. As predicted by previous
theory and research, participants compared themselves with people who were better and worse off, and interpreted these comparisons either positively (hoping to do as well as those better off, glad they were more fortunate than those worse off) or negatively (fearing they could never achieve the state of those better off but would end up in the state of those worse off). We found that our participants also compared themselves with others in order to gain information about their condition and how to cope with it. Worse health-related quality of life (as assessed by the SF-36) was associated with seeking information and with making negative comparisons with people who were better off and worse off.

Consistent with the I/C model, what chiefly determined the underlying factors in the social comparison scale was the direction and the type of affect experienced after the comparison, irrespective of the dimension.
Hence, of the four directions highlighted as important in both the literature\textsuperscript{1,11,12,31} and the interview study, namely, upward, downward, trajectory, and lateral, only two directional factors emerged. The lateral direction, deemed important by the theory itself and which emerged as important in the qualitative study, loaded onto the upward direction component, as did the trajectory items. This would suggest that lateral targets are interpreted as upward comparisons. The trajectory items were all positive trajectories (that is, although the target was worse off to start with, they ended up better or coping better), so it is perhaps not so surprising that these items also loaded with upward comparison.

An additional finding was that the subscales were totally unaffected by the dimension on which people were comparing, which both the literature and the qualitative study had suggested might be important. This implies that the dimension of comparison is less important than the affect resulting from the comparison. However, perhaps the two dimensions used in this study were too similar to influence responses, as they were both illness-oriented; had a third, non-relevant dimension been selected, different results might have emerged. Moreover, the questionnaire study asked about positive and negative affect resulting from upward and downward comparisons on both dimensions, but the qualitative study suggested that in real life people actually tend to select the dimension on which they compare to enable them to make positive comparisons.\textsuperscript{5} For example, our interviewees, in study 1, engaged in downward (both positive and negative) comparison on illness dimensions and upward (positive) comparison on the coping dimension. With downward comparison in chronic illness, it may be difficult to control the interpretation, due to the progressive nature of the illness;\textsuperscript{32} this means that there may be a tendency to interpret downward comparison as negative. To avoid identification with a future possible self, it may also be necessary to simultaneously engage in contrast. Conversely, they engaged in upward comparison on coping dimensions, which offer the possibility for imitation.

Information emerged as a separate component, which is not covered by the I/C scale, showing that in some cases the participants were not comparing in order to evaluate or self-enhance but were simply seeking information about their illness. This finding is consistent with one of the initial proposed purposes of social comparison.\textsuperscript{1} This subscale may also be particularly relevant to illness populations where uncertainty may be high, leading to a greater need for information about the illness. This interpretation is supported by the finding that the correlation between the information scale and the SF-36 scales was negative, indicating that when health status was better, the individual had less of a need for information than when they perceived their quality of life and health status to be bad. This relationship was the same for upward information interpreted positively and negatively, and downward information interpreted negatively, showing that the better the perception of health status, the less they engaged in upward positive and negative, and downward negative comparison. The reverse was true for downward positive, where better health status was associated with more downward positive comparison.

Limitations of this study include the low response rate and a self-selected sample. The sample was drawn from a self-help group, and only a minority of those approached responded to the invitation to take part, so this sample was not representative of all people with Ménière’s disease, which may have biased the results. In addition, it is not possible to generalize these results to all chronic illnesses; further studies would be needed to determine their applicability.

CONCLUSIONS AND IMPLICATIONS
In assessing which social comparison factors are important to those with a chronic illness
such as Ménière’s disease, it appears that the I/C model, which assesses the positive and negative affect associated with upward and downward social comparison, provides a relatively good description of the social comparison processes occurring in Ménière’s disease. However, comparing for information seems to be an additional, independent objective of comparison.

Awareness of these processes is useful for understanding how people with chronic illness spontaneously respond to the opportunities for social comparison information that they encounter. For example, in a longitudinal study of social comparison in Ménière’s disease, we found that greater levels of social comparison at baseline were associated with a deteriorating quality of life over the 10-month follow-up period. This suggests that there is a need to assist people with chronic illness to use social comparison more constructively. Using a scale such as the SCIS can help those supporting people with chronic illness to determine how they may respond to particular sources of information about chronic illness. For example, our findings suggest that in order to maximize the benefits of social comparison from the self-help group newsletter, it may be important to emphasize that the positive examples of how other members live and cope are attainable by new members. Cohn has suggested a range of techniques that could be employed to encourage a positive interpretation of upward comparison.

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REFERENCES

Appendix: Interview Schedule

I am interested in what you like to read in *Spin*, can you tell me about it?
Can you tell me what you like to read about?
So how do you feel when you read it?
Can you tell me more, are there any other parts that you like to read?
I’d like to know more about what it is you like to read. How do you feel when you read it?
What about the letter section, can you tell me what you read in that?
Can you tell me what it is that you like to read in this letter?
Can you give me an example of a helpful letter that you have read?
So how do you feel when you read these letters?
Can you tell me more about what it is that you like about them?
Can you think of any letters that you don’t want to read?
Can you give me an example of a letter that you don’t like reading?
How do you feel when you read these letters?
Can you tell me any more about what it is that will stop you from wanting to read them?

References

30. Ménière’s Society. Available at: www.meniere’s.co.uk (accessed December 2005).