

1 **The Experience of Identity Change in People who Reported Having a Diagnosis of**  
2 **Multiple Sclerosis: A Qualitative Enquiry**

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9 **Keywords**

10 Multiple Sclerosis (MS), Self, Rehabilitation < Adaptation, Coping, Enduring, Psychology,  
11 Psychological Issues

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22 **Practice Points**

23 Multiple sclerosis (MS) may cause changes to a person's sense of self. Using a previously  
24 held social identity, such as the family identity, can allow a person to acknowledge their  
25 changed self-identity and accept social support, which can positively affect their mood. People  
26 with MS may be more willing to accept social support from others once they assimilate their MS  
27 into their social identity.

28 **Abstract**

29 Background - A diagnosis of multiple sclerosis (MS) can lead to changes to a person's sense  
30 of self. The aim of this study was to investigate the subjective experience of identity change  
31 and subsequent adjustment to MS.

32 Methods - Semi-structured interviews were conducted with 16 people who reported having  
33 MS. Interviews were analysed using thematic analysis.

34 Results - In the early stages of the disease progression, participants wished to compartmentalise  
35 the disease. Over time, through reflected self-appraisals, brought about by increasing  
36 symptoms and changed relationships with others, the disease became a part of participants'  
37 self-identity.

38 Conclusions - For people with MS, incorporating and accepting the disease as part of their  
39 self-identity can have positive implications for seeking and receiving support.

40 **Keywords**

41 Multiple Sclerosis, Self, Rehabilitation, Adaptation, Self-identity

42 **Word Count**

43 **4039**

44

## 45 **Introduction**

46 Multiple Sclerosis (MS) is a chronic, progressive, often degenerative condition which affects  
47 the central nervous system.<sup>1</sup> MS affects approximately 100,000 people in the UK<sup>2</sup> and 2.5  
48 million people worldwide.<sup>3</sup> The condition can lead to a wide range of symptoms, including  
49 cognitive and visual impairment, vertigo, sexual, bowel and bladder dysfunction, fatigue,  
50 muscle weakness, ataxia and spasticity.<sup>4</sup> MS can have a devastating impact on a person's  
51 sense of self, with body and performance failures leading to feelings of loss of self and  
52 changes to identity<sup>5</sup>, which can have a negative psychological effect on an individual.<sup>6,7</sup>

53 One explanation for how individuals acquire their sense of self is through 'reflected  
54 appraisal'. Reflected appraisal refers to the process through which people's self-views are  
55 influenced by their perceptions of how others see them.<sup>8</sup> Due to the impact of MS on a  
56 person's sense of self and identity,<sup>5</sup> people with MS may perceive that others view them  
57 differently because of their MS.

58 However, people can have multiple identities to represent themselves in different situations.<sup>9</sup>  
59 A person can respond to these identities and either incorporate them into their sense of self  
60 and think and act accordingly or have a complete lack of interest or motivation in an  
61 identity,<sup>10,11</sup> a person can choose to accept an identity as part of who they are, or to reject it.

62 It is possible that a person could have an identity which they have not internalised to their  
63 overall sense of self. As MS is 'imposed' on a person and causes changes to a person's  
64 identity and sense of self, it is possible that this MS identity may not be incorporated into a  
65 person's sense of self, a person may choose not to accept this identity as part of who they are,  
66 this could lead to negative effects of identity change<sup>12</sup> and an unwillingness to seek social  
67 support with others who share the MS identity.<sup>10</sup>

68 The Social Identity Model of Identity Change<sup>12</sup> posits that belonging to a large number of  
69 different groups before a life-changing transition, such as a diagnosis of MS, can protect  
70 individuals from the effects of this transition by providing them with groups to rely on.<sup>6</sup> These  
71 groups form a basis for drawing social support, whilst providing a secure base for people to  
72 establish new identities, which are integrated and compatible with previous identities, enhancing  
73 a person's identity continuity.<sup>12</sup> This can reduce the negative effects of identity loss on  
74 psychological wellbeing.<sup>6</sup>

75 Whilst research demonstrates that individuals undergo a loss of aspects of identity following a  
76 diagnosis of MS,<sup>5</sup> the individual's experience of this change is less well understood. There are  
77 also differences in the extent of detrimental effects of having MS that people with MS  
78 experience<sup>13,14</sup> and how they live with an unpredictable disease,<sup>15</sup> suggesting that some factors  
79 may prevent the negative effects of identity loss, such as psychological factors including  
80 perceived stress and emotion focused coping.<sup>16</sup> A person's response to the disease could have an  
81 effect on how they manage their illness and may explain why empirical studies evaluating the  
82 effectiveness of therapies for depression and anxiety in people with MS, have mixed  
83 results.<sup>17,18</sup>

84 The aim of this study was to investigate the subjective experience of identity change over time  
85 to provide insight into this process.

## 86 **Methods**

### 87 Participants

88 Participants were identified from a feasibility randomised controlled trial (RCT) of an  
89 adjustment intervention for people who reported a diagnosis of MS.<sup>19</sup> The trial compared  
90 individual vs. group delivery of the same adjustment intervention.<sup>20</sup> Participants from both arms

91 of the trial who consented to be interviewed were contacted four months after randomisation.  
92 Sixteen participants were interviewed from the 21 participants invited. Ethical approval was  
93 granted as part of the feasibility RCT,<sup>19</sup> reference 12/EM/0380.

94 \*Table 1 here\*

95

## 96 Data Collection

97 Semi-structured interviews were conducted by two researchers, nine by AB and seven by KS,  
98 using the same interview schedule (Appendix 1). Open-ended questions were asked which  
99 allowed for exploration of participants' thoughts and feelings on their social relationships before  
100 and after diagnosis, and changes to social relationships over time, as well as any effect these  
101 changes may have had on participants mood. Interviews took place either at the University or at  
102 the participant's home, depending on their preference, and lasted between 20 and 60 minutes.  
103 Interviews were audio recorded and transcribed verbatim.

104 Where it facilitated discussion, eco-mapping techniques<sup>21-25</sup> were used to help elicit  
105 information about an individual's previous and current social identities. Eco-maps allow a  
106 graphical representation of the relationships that people have and their connection to larger  
107 social networks.<sup>22</sup> This can provide us with valuable information about a person's social  
108 network, including the structure, size and function of the network and individual  
109 connections.<sup>26</sup> Eco-maps are useful for mapping and tracking changes to people and their  
110 social relations and contacts over time, capturing the participants' own perceptions,<sup>27</sup> in a  
111 visual, standardized manner.<sup>28</sup> The use of eco-maps allowed us to gain insight into participants'  
112 social lives both before and after the MS diagnosis. A fictitious example of an eco-map can be  
113 found in supplementary figure 1.

## 114 Data Analysis

115 To understand and gain further insight into the process of subjective identity change, an  
116 interpretive epistemological stance<sup>29</sup> was taken to collect multiple realities from participants.

117 A thematic analysis was conducted,<sup>30</sup> applying the SIMIC<sup>12</sup> as a lens for understanding and  
118 structuring the data. The interview data were examined to identify categories most pertinent  
119 to the research question. Once this had been achieved, the process of sense making was used  
120 to find connections and relationships in the data. This was achieved by successive reading of  
121 the texts, critical reflection and persistent immersion in the text. Following recognition of  
122 themes, with the support of quotes, these were discussed and compared and contrasted with  
123 within the research team to ensure a consensus.

## 124 **Results**

### 125 Overview

126 Themes identified in the data were: concealing the disease, presenting a more positive  
127 identity, effects of increasing symptoms/changing relationships with others, social support,  
128 family as a secure base, self-reflected appraisal, and integration or compartmentalisation of  
129 the MS identity.

130 The analysis revealed patterns of adjusting to MS over time, with different factors affecting  
131 identity changes at different stages. The patterns of adjustment all began with participants  
132 concealing their disease by denying their diagnosis and/or compartmentalising the MS whilst  
133 retaining a positive social identity. Due to progressing symptoms which resulted in the MS  
134 being more visible to others and subsequent changed relationships, participants began to  
135 experience the negative effects of identity change and sought social support, which led to a  
136 self-reflected appraisal and an acknowledgement of MS as an identity that they hold.

137 Following this realisation, participants either incorporated their MS into their self-concept, or  
138 did not accept MS as part of their self-concept and kept this identity compartmentalised.

### 139 Concealing the disease

140 Diagnosis was often seen as an identity marker and signalled the start of the adjustment process.  
141 However, the time between first acknowledging symptoms and receiving a diagnosis might have  
142 made it difficult for some participants to come to terms with their MS.

143 Dawn<sup>1</sup> (F, 58, RR<sup>2</sup>) ‘...I struggled with MS when I was first diagnosed with it, and I  
144 struggled with the idea of having it and the fact that I’d had it an awful long time but  
145 wasn’t diagnosed.’

146 Some participants felt that they should attempt to preserve their pre-diagnosis identity, and to  
147 hold on to their established sense of self and identity. They also felt that they should keep their  
148 diagnosis private.

149 Rebecca (F, 42, RR) ‘I’ve not gone around announcing that I have MS.’

150 Some participants felt that they needed to preserve their previous identity due to the perceived  
151 stigma they attached to the MS identity. Because of their perceptions and worries associated  
152 with having MS, participants were unwilling to accept their MS identity due to the implications  
153 this has on their idea of their future self.

154 Rosie (F, 59, RR) ‘It is a bit early days. But as I mentioned before I have avoided  
155 certain situations where there are MS meetings, because, you know, it is hard to think  
156 that, you know, personally that I might be in that, in a wheelchair so many years down  
157 the line.’

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<sup>1</sup> Pseudonyms are used in these quotations.

<sup>2</sup> Pseudonym, Gender (M = Male, F = Female), Age, Type of MS (RR = Relapsing remitting, SP = Secondary Progressive, B = Benign, DU = Diagnosis Unknown, NO = Neuromyelitis Optica)

158 Some social relationships reinforced the pre-diagnosis identity, which may have led to  
159 participants seeing their identity as unchanging.

160 Rebecca (F, 42, RR) ‘There’s erm, one or two [friends], that treat the MS as though  
161 it’s never happened.’

162 Being treated in a way in which the MS ‘never happened’ reinforced the pre-diagnosis identity.

163 To maintain high self-esteem, Rebecca appeared to acknowledge positive aspects of herself as  
164 important and unchanging whilst attaching low importance to aspects of identity related to  
165 negative self-beliefs, such as the feared consequences of MS. In a similar way, participants  
166 attempted to regain aspects of their previous identity that may have been lost due to the effects  
167 of MS. This externalisation of MS was a way of coping and provided an avenue to vent their  
168 frustrations. Another example of the externalisation of MS can be seen in the initial concealment  
169 and relative secrecy regarding a diagnosis of MS.

#### 170 Presenting a more positive identity

171 In the data, participants articulated numerous identities. One participant attempted to preserve a  
172 prominent marker of her pre-diagnosis identity, work, despite increasing symptoms having an  
173 effect on this.

174 Kelly (F, 28, RR) “One year when I got ill I was going in [to work], going in, going  
175 in and I was pushing through, pushing through, pushing through, and I got told off by  
176 HR because I shouldn’t have been in in the first place.”

177 Because of the highly valued nature of this (work) identity, Kelly attempted to hold on to this  
178 identity despite the increasing symptoms. Kelly downplayed markers of an identity that she  
179 saw as unimportant and stigmatised (MS) whilst acting in accordance to an identity that she



180 saw as highly valued (work). Exchanging a stigmatised negative identity for something that the  
181 participant saw as valued was one technique for coming to terms with the diagnosis.

### 182 Effects of increasing symptoms/changing relationships with others

183 The physical symptoms of MS were perceived as markers of the illness progression and  
184 changing sense of self. As symptoms became more prominent, participants found that their  
185 sense of self was not consistent with markers of their own identity, or how others saw them, and  
186 these inconsistent views led to a re-evaluation of what the participant viewed as their self. This  
187 re-evaluation triggered a subjective shift in self-perception.

188 Evelyn (F, 60, SP) ‘I had to put on an act of being OK, even when I wasn’t.’

189 Intrusive symptoms of MS often led to perceived changes in their relationships with other  
190 people. This led participants to re-evaluate their sense of self and they began to see the MS as  
191 part of who they were.

192 William (M, 47, RR) ‘And they [friends], they probably don’t realise there’s a difference  
193 but, cause, there is a difference, because I’m not, I’m not the same person. On the  
194 outside I am, but not on the inside. I can’t always do the same things that I used to be  
195 able to do.’

### 196 Social support

197 Participants saw social relationships as a way of dealing with the problems associated with MS.  
198 Participants chose the type of support that they felt they required by actively choosing which  
199 identity and reflected appraisal they needed at that moment in time.

200 Beth (F, 56, B) ‘[Friends] haven’t really changed, it’s been more about me finding out,  
201 which friend can offer me the right support at the right time.’

202 Social support in general appeared to be closely linked to participants' mood and appeared to  
203 help participants come to terms with their diagnosis.

204 Dawn (F, 58, RR) 'She [friend] almost brought me back into the fold, so to speak.'

205 Social relationships also caused negative emotions, due to the conflict they caused between a  
206 person's previous identity and their new emerging one, such as struggling to explain to friends  
207 that they are tired. A number of relationships were lost or disrupted following the changes to  
208 identity due to MS. The loss of social relationships due to identity change had a negative  
209 psychological effect on participants' mood.

210 Receiving social support from other people with MS appeared to normalise the emerging MS  
211 identity.

212 Kelly (F, 28, RR) 'There's actually people out there that have, are doing, have done,  
213 have experienced what I've gone through, have been through.'

214 Due to the reluctance to accept MS as part of their identity during the early stages of the  
215 adjustment process, participants may have been more inclined to seek social support from those  
216 who they saw as sharing their pre-diagnosis identity.

#### 217 Family as a secure base for identity reconstruction

218 The family provided a source of social support for participants during the identity change.  
219 Family members were often the first people to know about participants' diagnosis of MS, and  
220 were also seen as useful in providing support for some of the problems that occurred during  
221 identity change.

222 Kelly (F, 28, RR) 'Immediate family have to spend time with me no matter what...what  
223 mood I'm in, and what's going on yeah, that's the best support there is...'

224 The family can be quite a large social group. One participant, who before diagnosis had  
225 expressed strong ties with his wider family group, found that this diminished following  
226 diagnosis so that he only remained close to immediate family members. This change was due to  
227 the emerging symptoms of MS changing his outlook. Some participants found that not all  
228 aspects of their family initially provided a secure base for identity reconstruction.

229 Evelyn (F, 60, SP) ‘My ex-partner began to resent me as soon as my disability became  
230 really apparent.’

231 For the family to be an effective secure base for identity reconstruction, all members of the  
232 family need to work together to accept and adjust to the diagnosis. This narrative of the family  
233 not acting as a secure base suggests how important it is for coping strategies to be aligned  
234 between the family and the person with MS.

### 235 Self-reflected appraisal

236 The emergence of symptoms may cause a person with MS to re-examine their identity and sense  
237 of self and be more open to self-reflected appraisals. Over time, participants often began to  
238 acknowledge the changed sense of self based on how others responded to them.

239 Leonard (M, 46, DU) ‘If people see the [walking] stick, they’ve got a completely  
240 different attitude towards you.’

### 241 Integration of the MS identity into changing sense of self

242 Over time the MS, which was externalised due to the negative identity connotations, could  
243 become integrated into a pre-existing self-concept based on self-reflected appraisals. Participants  
244 began to view themselves based on how others reacted to them. Over time, symptoms may  
245 become progressively more visible to others, which led participants to re-evaluate their sense of  
246 self.

247 Leonard (M, 46, DU) ‘I knew for three years before I actually let it [MS] affect my  
248 life...And then it got to the point where it does, so you can’t hide it anymore.’

249 The ability to retain a sense of identity continuity appeared to be associated with positive  
250 psychological wellbeing. Indeed, our participants used this as an early coping mechanism until  
251 the disease became more prominent, at which point they felt a need to incorporate this identity  
252 into their sense of self and engage in activities that were more representative of the MS identity,  
253 such as attending MS support groups. This was, however, not universal. Three participants  
254 continued to compartmentalise the disease following the recognition of the MS identity. This  
255 may reflect differences in willingness or ability to incorporate the MS identity into the overall  
256 sense of self.

#### 257 Compartmentalising the MS identity

258 The MS identity is one that is forced on to a participant and not an identity developed through  
259 motivations or goals. The stigmatised nature of the identity often resulted in a lack of  
260 personal value being placed on the MS identity, and people with MS may wish not to identify  
261 with or behave in a way that is consistent with the negatively judged MS identity. One pattern  
262 of adjusting to the MS identity was to continue to compartmentalise the identity and choose  
263 not to incorporate this into the overall self-concept.

264 Alanah (F, 55, NO) ‘My way of coping is... if I don't think it [MS] is happening, then  
265 it is not. If I ignore it, it is not there. It is like a tree falling in the forest, does anybody  
266 hear it, you pretend it’s not there.’

267 Compartmentalising the MS identity presented a relative absence of internalisation of the MS  
268 into the self-concept. Instead, participants presented identities that they considered to be more  
269 highly valued.

270 Beth (F, 56, B) ‘Because my MS has got worse recently so that’s why I’ve probably got  
271 a bit more proactive than I was, because I just didn’t do anything for years because I  
272 have been diagnosed, what, 12 years, and I haven’t done...I’ve just got on with it.’

273 Assimilating the MS identity into self-concept

274 On acknowledging the MS identity, several participants began to assimilate this identity into  
275 their sense of self.

276 Dawn (F, 58, RR) ‘Because it [MS] was mine and I wanted to control it. I didn’t  
277 understand it, so how can I tell people what I’ve got if I don’t understand it? I didn’t  
278 understand it. I did lots of research and reading up, and that, and I still didn’t understand  
279 it. I knew all the words, but they just didn’t work for me then. It wasn’t until two years  
280 after I was diagnosed, I suppose, that I actually got to grips with it and thought, ‘This is  
281 ridiculous, make friends with it and stop worrying about it’, which is what I did.’

282 A common theme in the data was that after an initial adjustment to the diagnosis of MS,  
283 participants acknowledged that they were more willing to talk about their disease. Participants  
284 may have been unwilling to talk about their diagnosis without first adjusting to their diagnosis  
285 and having incorporated the MS identity into their self-concept. Similarly, whilst social support  
286 can help a person adjust to their changing identity, acceptance of a changed identity can have  
287 implications for the social support a person seeks and receives in the future.

288 Francis (F, 54, RR) ‘No, I probably wasn’t ready [to talk about the MS]. The first year I  
289 couldn’t get about anyway. I was quite ill for the very first year and then I... sort of  
290 started just getting used to having problems and I probably... No. I think, you know,  
291 people say, ‘Oh, there’s this you can phone’ and I had always thought, oh I don’t want to

292 speak to other people, it's all the same thing and... You know, I would always have that,  
293 sort of, attitude. I think I was just about ready now to have some contact.'

## 294 **Discussion**

295 Social Identity Theory<sup>31</sup> posits people have multiple identities depending on how they see  
296 themselves in the social situation they are in. Whilst, the MS identity may be imposed on an  
297 individual due to their diagnosis, the participants in this study articulated multiple identities  
298 highlighting a pattern of recognising their MS and choosing to assimilate the MS into their  
299 social identity or compartmentalise their MS. In the early stages of the disease progression  
300 following diagnosis, participants wished to compartmentalise and conceal the disease and  
301 continue with their pre-diagnosis identity, a similar finding to recent research<sup>32</sup> however, over  
302 time they came to accept and acknowledge their MS and learned to cope with the everyday  
303 problems associated with living with MS. Compartmentalisation of the MS identity could  
304 reflect early coping strategies<sup>9</sup> and it appears that individuals can assimilate the MS identity  
305 into their self-concept at a later time.

306 Presenting a more positive identity in social situations appeared to be beneficial for some  
307 participants. This exchange of identities can be a stressful process that requires considerable  
308 psychological resources<sup>33</sup> and this pattern of compartmentalising thoughts about the self could  
309 provide greater resilience in times of stress.<sup>34</sup>

310 Participants restructured their social resources in an attempt to adapt to the MS. By receiving  
311 social support from close family members and friends, participants were able to acknowledge  
312 their emerging identity in a supportive environment, consistent with the Social Identity Model of  
313 Identity Change.<sup>12</sup> The family was a secure base for identity reconstruction, in line with previous  
314 research.<sup>35,36</sup> This suggests that there are stages to adjustment; however, these did not appear to  
315 be the same across the sample. However, most participants initially did not acknowledge the MS

316 as part of their identity and instead saw this as a stigmatised identity, which led to an initial  
317 **concealment** of the diagnosis and a period of withdrawal. Presenting a more positive self-image  
318 and compartmentalising the disease allowed participants to cope with the early stages of  
319 adjustment, allowing them to present an identity that they saw as more highly valued to maintain  
320 self-esteem.<sup>31</sup> However, as symptoms became more prevalent, people around the participant  
321 began to treat them differently causing a self-reflected appraisal and a changing self-concept.  
322 The use of social support during this time appeared to be beneficial for coming to terms with this  
323 change in identity. The increasing presence of MS symptoms combined with social support and  
324 positive interactions with others appeared to help people recognise the MS as an identity that  
325 they hold.

326 A person's identification with their MS, and therefore assimilation of this identity into their self-  
327 concept, appears to be linked to the coping strategies they use. Acting in accordance to an  
328 identity that individuals identify with can result in autonomous behaviour in line with this  
329 identity, such as increased motivation to communicate with other people who share the MS  
330 identity. This has implications for the delivery of interventions for mood problems in people  
331 with MS, in that these interventions may be more beneficial once a person has started to come to  
332 terms with the diagnosis and incorporate the MS identity into their self-concept.

333 These findings need to be considered in light of the study's strengths and limitations. To ensure  
334 the quality of the research, data were rigorously analyzed. Once the themes were drawn out,  
335 with the support of quotes, these were discussed and compared across members of the research  
336 team. **The participants were a unique group of people at a certain time speaking in a certain**  
337 **context with a particular researcher, and this should be considered in the transferability of results**  
338 **and conclusions.** One participant who originally reported having a diagnosis of MS was later  
339 found to have a diagnosis of neuromyelitis optica but was retained in the study.

340 In conclusion, this study has provided us with **insight into how** people with MS acknowledge  
341 and incorporate their MS into their self-concept over time. It appears that people with MS do  
342 incorporate their illness into their identity over time and this appeared to have a positive effect  
343 on mood. **The availability of social support and the coping strategies a person uses may affect**  
344 **the time it takes for a person to come to terms with this change of identity.** MS is more readily  
345 accepted as part of a person's identity if it is not stigmatised and is seen as only a part of a  
346 person's identity. If the diagnosis is stigmatised, people may not readily acknowledge MS as a  
347 significant part of their identity, which may restrict their willingness to receive social support,  
348 which could then impact on their mood. Using a previous social identity such as the family  
349 identity, can allow a person to acknowledge their changed self-identity and accept social  
350 support, which can have a positive effect on their mood.

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### 353 **Conflict of Interest**

354 The authors disclose no conflict of interest.

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358 This manuscript has not been previously presented.

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445

446 **Table 1:** Demographic characteristics of the interviewees.

447

N=16		Mean (SD)
Age (Years)		47.3 (11.9)
Time Since Diagnosis (Years)		8.1 (6.6)
		n
Gender	Men	5
	Women	11
MS disease subtype	Relapsing-Remitting	9
	Primary Progressive	0
	Secondary Progressive	2
	Benign	1
	Neuromyelitis Optica	1
	Unknown	3
Ethnicity	White British	14
	Asian	2
Relationship Status	Married/Partner	10
	Single/Divorced	6

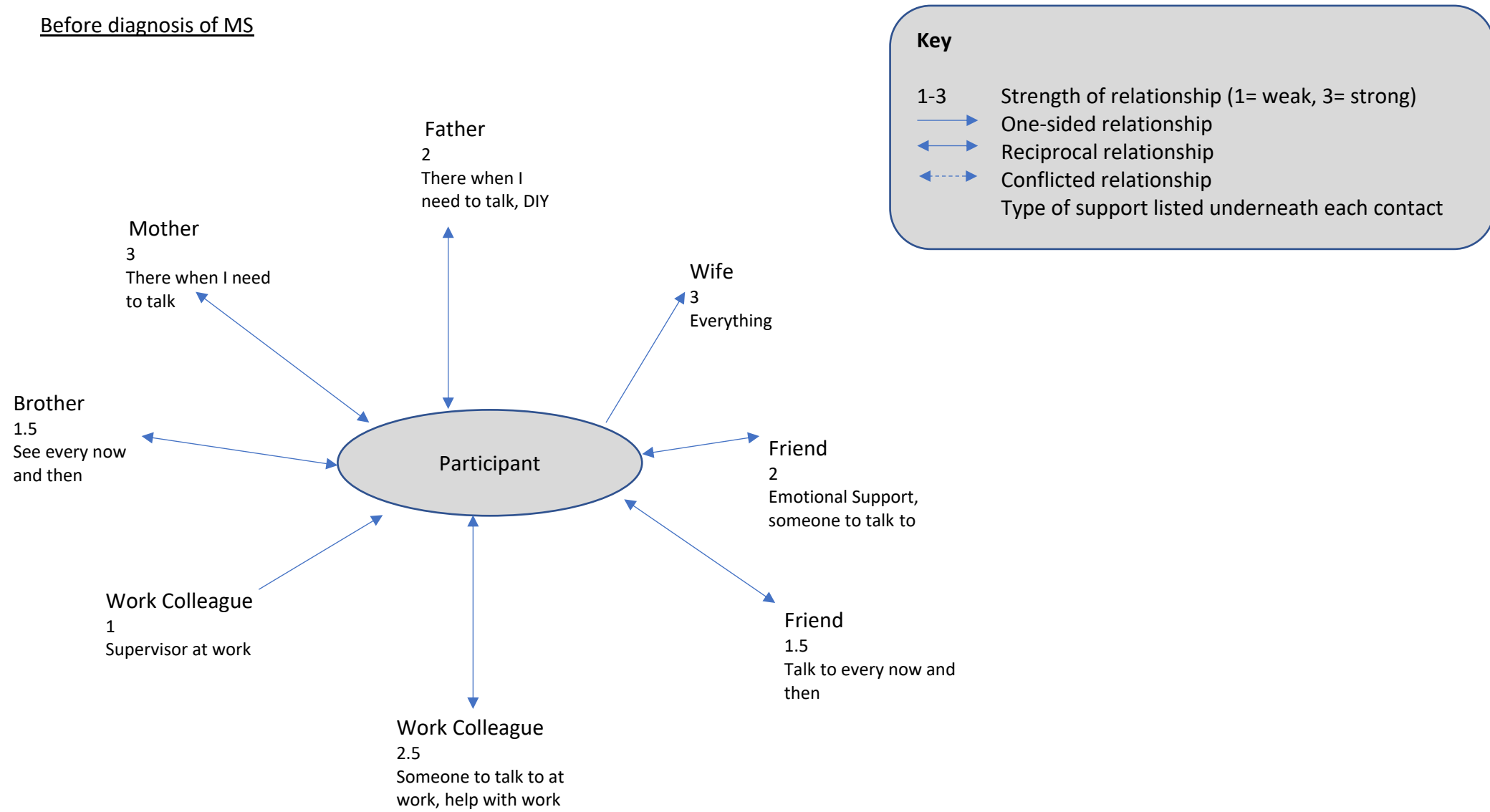
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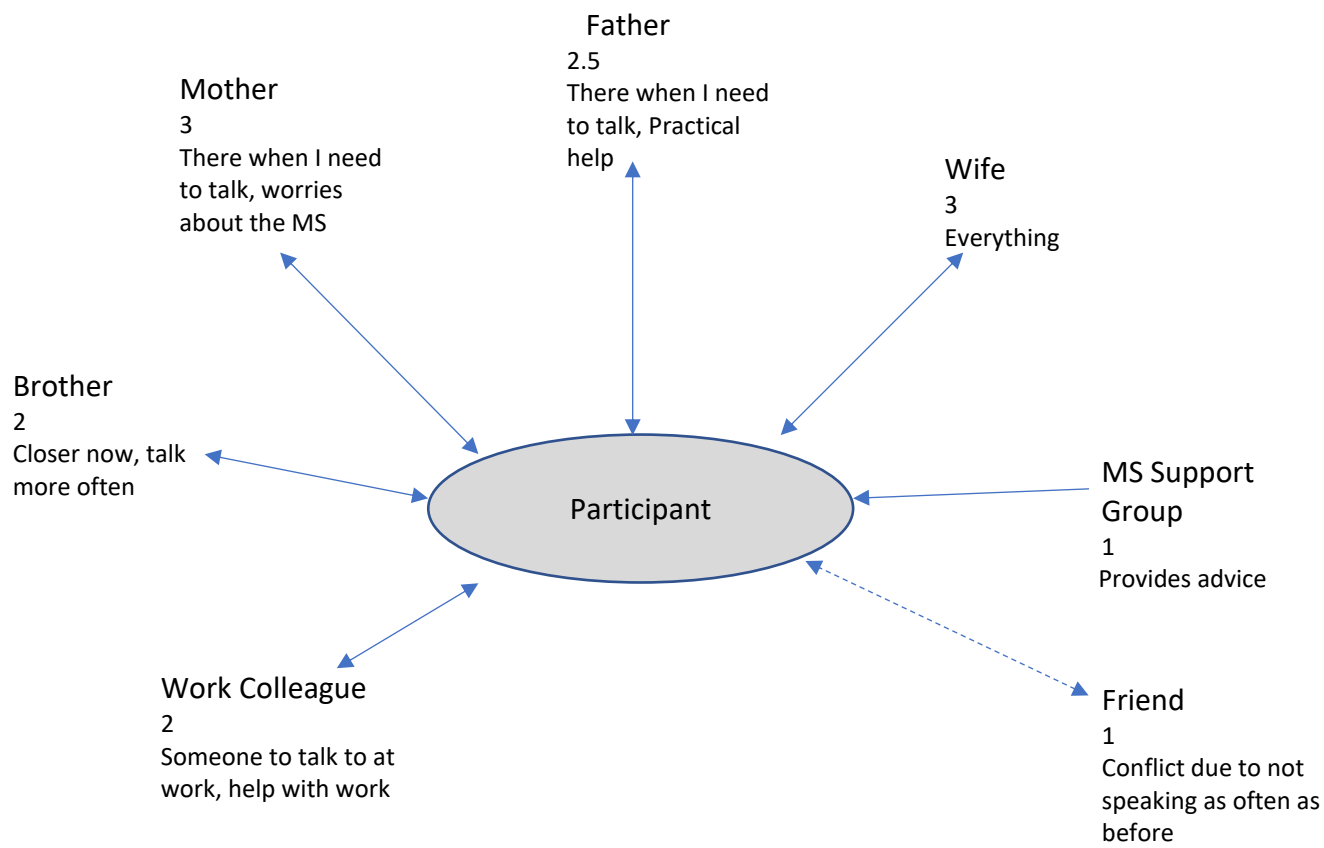
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Supplementary Figure 1: Fictional example of an eco-map

Before diagnosis of MS



After diagnosis of MS



**Supplemental Material Table S1: Interview Guide**

<b>Topic</b>	<b>Example questions/processes</b>
1) How participants found the intervention (From the feasibility study)	What do you feel you gained from taking part?
	Content/format – relational aspects
	What do you feel were the strengths of being part of a group/individual) intervention?
	Did you have a preference of group or individual intervention beforehand?
2) Eco-mapping	Explain to participant
	Identify social contacts people/groups before diagnosis
	Map relationship type, strength, type of support, direction, frequency, changes for each person/group identified
	Repeat for after diagnosis
	Discuss any changes between the two eco-maps
3) Degree of identification with social groups	Do you identify with and consider yourself to be a part of the groups you have identified?
	Are there any other social groups you consider yourself to be a part of ?
4) Impact of social groups and changes on emotional adjustment/mood	How does being a part of a group affect your mood?
	How have changes to your social groups affected your mood? (Draw back to any changes identified in the eco-mapping if necessary)