

Development and Evaluation of a Post–Hip Fracture Instructional Workshop for Caregivers

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1 **Title: Development and Evaluation of a Post-Hip Fracture Instructional Workshop for Caregivers**

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40

41 **ABSTRACT**

42 **Background and Purpose:** A hip fracture is an unexpected traumatic event and mostly the informal
43 caregivers of patients with an acute hip fracture have only short time to learn the new skills of
44 postoperative care and handling of the patient. This sudden responsibility changes the life of the
45 caregiver who perceives a higher level of preoccupation. The objective of this study was to develop and
46 test feasibility for a post-hip fracture in-patient instructional workshop for caregivers of older adults with

47 hip fracture, and to establish their knowledge of hip fracture recovery, and perceptions of the utility and
48 satisfaction with the workshop.

49 **Methods:** This two-part study was conducted at the (blinded for per-review) from September 2016 to
50 April 2017. We invited caregivers, of consecutive patients (60 years or older) hospitalized for a
51 surgically-treated fall-related hip fracture, to attend an informational and skill-development hospital-
52 based workshop (60-90 minutes in duration) on management strategies post discharge. Following the
53 workshop, we invited caregivers to complete a questionnaire to obtain their knowledge about care after
54 hip fracture, and their perceived concerns. Furthermore, we request they provide feedback on workshop
55 utility and satisfaction (0 to 10 points) and suggestions for improvement.

56 **Results and Discussion:** Over eight months we delivered 42 workshops. There 103 caregivers who
57 attended the sessions and enrolled in the study, mean (SD) age 52.1 (12.8) years and most of them
58 (69%) were women. Caregivers' main concern was apprehension for delivering physical care to their
59 family member/friend (75%), followed by lack of time (42%). Caregivers who were employed were
60 3.16 times as likely to be concerned about time availability to provide care for their family
61 member/friend. The median (Q1-Q3) of both workshop utility and satisfaction was 10 (10,10),
62 minimum-maximum: 7-10.

63 **Conclusions:** Caregivers in this study stated that the workshop was useful and satisfactory. As
64 caregivers play such a vital role in recovery after hip fracture providing knowledge and skill
65 development as part of healthcare delivery may support more person-centered care.

66

67 INTRODUCTION

68 Hip fractures are common in later life ¹ resulting in significant challenges to older adults'
69 independence.² Some older adults experience a loss of ability to complete three or more activities of

70 daily living (ADL) within a short timeframe. This loss in ADL independence post-hip fracture is
71 considered “catastrophic”,³ and can necessitate an increase in supportive care, commonly provided by an
72 informal caregiver (relative or friend) in some countries around the world, such as Spain,⁴ China,^{5,6}
73 Brazil⁷ or Canada.^{8,9} The reliance on informal or family caregivers in these countries contrasts with
74 some Nordic countries, where there is sufficient health care delivery post-discharge provided by the
75 social and health care system¹⁰.

76

77 Caregivers play an important role in providing social, emotional and economic support.^{9,11} Due
78 to the sudden and unanticipated nature of hip fracture, informal caregivers also need to understand the
79 injury and consequences, while developing strategies on how to provide the best care to their family
80 member/friend,⁹ in a short period of time, which could explain the lower self-efficacy expressed by
81 some caregivers.⁵ Thus, it is not surprising that several studies^{4,11} identified high caregiver burden in
82 50% of the caregivers at 6¹¹ and 26% at 12 months¹² after hip fracture. Further, the burden was
83 associated with negative consequences for caregivers’ overall health.¹¹

84

85 As caregivers frequently provide significant support during recovery from hip fracture,^{5,11} health
86 professionals should consider their knowledge and perceptions.⁸ In doing so, this focus within the
87 rehabilitation journey could reduce stress⁹ and caregiver burden,⁵ and improve patients’ recovery.^{8,9}
88 Importantly, previous research recognized that some caregivers want to be included in the rehabilitation
89 process,^{9,12} and they requested more information or guiding resources.^{8,9,13} To respond to caregivers’
90 needs, some studies^{14,15} designed tools such as a comprehensive theory-based online hip fracture
91 resource center for caregivers¹⁴ or FReSH Start, a toolkit (manual and online resources)^{16,17} for fracture
92 recovery for patients and caregivers. However, the online resource center was predominantly available

93 post-discharge, but caregivers required more information during the hospital stay to facilitate the
94 transition home.^{8,9,13}

95

96 Thus, as caregivers provide valued and essential care during recovery from hip fracture^{8,9} it is
97 fundamental to address their high caregiver burden.^{5,11} Furthermore, it is important to consider
98 caregivers' request for more information on the recovery process, and the need to design new strategies
99 for training caregivers.¹³ Therefore, in this study, our objectives were first to develop and test feasibility
100 for a post-hip fracture in-patient instructional workshop for caregivers of older adults with hip fracture,
101 and second to establish their knowledge of hip fracture recovery, and their perceptions of the workshop
102 utility and satisfaction.

103

104 **METHODS**

105 This was a two-part study to develop and evaluate a comprehensive in-hospital instructional workshop
106 for caregivers of older adults with hip fracture. As part of this process, we invited caregivers to provide
107 feedback on the workshop to determine their acquired knowledge, and perceptions of workshop utility
108 and satisfaction.

109

110 **Setting**

111 This study was conducted at the (*blinded for peer-review*) between September 2016 and April 2017. It
112 was approved by the hospital ethics committee (*blinded for peer-review*).

113

114 **Participants**

115 We invited caregivers of all older adults (65 years or older) admitted to the hospital over an eight-month
116 period to join a health professional-delivered 60-90 minute instructional workshop. Recruitment

117 occurred either via a personal invitation from the ward nurses, and/or informational posters strategically
118 placed on the hospital unit.

119

120 **Data Collection**

121 We designed a self-administered paper-based questionnaire for caregivers to evaluate the workshop. We
122 asked caregivers about their: (1) basic sociodemographic information, and their perceptions of their
123 family member/friend's pre-fracture function; (2) knowledge regarding mobility recommendations post-
124 hip fracture; and (3) perceived concerns about returning home with their family member/friend after hip
125 fracture. We also included two questions (using a Likert scale) to determine caregivers' satisfaction with
126 and perception of the instructional workshop. These two questions used a scale between 1 (lowest)
127 and 10 (highest) perceptions of workshop utility and satisfaction. To obtain feedback for future iterations
128 of the workshop, we also included two open-ended questions, to inquire about additional topics to
129 include in the workshop, and suggestions on how best to support caregivers' workshop attendance at
130 future sessions. Study coordinators provided consent forms and the questionnaire (at the end of the
131 workshop) to caregivers who agreed to enroll in the study. Once completed, caregivers who signed the
132 informed consent form placed their anonymized questionnaires in a locked box located on the hospital
133 ward.

134

135 **The Intervention: Post-Hip Fracture Instructional Workshop**

136 The in-patient instructional workshop was created following feedback from previous caregivers of older
137 adults post-hip fracture who requested basic skill development for ADLs, support with transfers and
138 exercise instruction.¹² It was designed by a multidisciplinary team composed of an orthopedic surgeon,
139 one nurse, two occupational therapists, and one physiotherapist. Two occupational therapists and the
140 physiotherapist delivered the workshops. The design of the workshop took 3 months and included the

141 following stages: (1) a review of caregivers' experiences and needs for older adults with hip fracture,
142 existing hip fracture clinical practice guidelines, and existing educational materials for hip fracture
143 recovery; (2) four 1-hour team meetings to review materials identified in stage one, and finalize the
144 content of the workshop; (3) two workshop test sessions to approximate workshop duration, content and
145 delivery; and (4) a follow-up meeting to reduce and redesign the contents of the workshop with feedback
146 from the caregivers from the test sessions. The final workshop content was informed by national and
147 international clinical practice materials and guidelines for hip fracture,^{16,18-22} systematic review²³ and
148 clinicians' previous experience with caregivers for older adults with hip fracture.^{16,19-21,24}

149

150 The duration of the final version of the workshop ranged from 60 to 90 minutes, depending on
151 caregivers' questions and group discussion. It consisted of two parts: (1) background knowledge and
152 information on hip fracture and its recovery; and (2) caregivers were given the opportunity to practice
153 hands on skills, such as supporting their family member/friend with transfers, walking and other ADLs.
154 We designed the first part of the workshop using the adult-learning theory "Transformational
155 Learning",²⁵ based on the construction and design of learning processes that generate changes in
156 perspectives and cognition. In this part we provided knowledge about hip fracture recovery, focused on
157 understanding caregivers' perception, and sometimes we challenged limited or mistaken beliefs about
158 hip fracture, and the care process. The second part was based in the "Experiential Learning Theory",²⁶
159 summarized as "learning by doing". In this section, caregivers had the opportunity for skill development
160 with other caregivers, and the added bonus of monitoring and feedback by the hospital therapists.

161

162 Caregivers were invited to attend one session, but the health care team provided two sessions/week and
163 caregivers could attend the workshop as many times as needed. However, those caregivers who attended
164 more than one session only completed one questionnaire.

165

166 A typical workshop included eight participants and started with introducing caregivers' and health
167 professionals'. This approach was chosen so that the health professionals delivering the workshop could
168 individualize the content to the needs of the audience. Following this, health professional provided
169 background material using videos and pictures to illustrate important points, but they also encouraged
170 caregivers to ask questions and interact with the group. The background portion of the workshop usually
171 lasted approximately 35 minutes, and contained eight distinct sections, briefly described below.

172

173 **Part 1: Background Knowledge (35 minutes)**

174 (1) *Common beliefs about hip fracture* (10 minutes). This section provided the opportunity for the
175 health professionals to understand caregivers' knowledge of hip fracture (e.g., mortality,
176 functional recovery), and to encourage dialogue on misperceptions, countered with presentation
177 of current evidence.

178 (2) *Brief description of hip anatomy and biomechanics, classification of hip fracture, surgery and*
179 *post-operative mobility prescription* (2 minutes). This section provided general information,
180 including an overview of activities to avoid early after surgery for hemiarthroplasty.

181 (3) *Pain management* (3 minutes).^{16,20-22} Here, health professionals engaged caregivers on "typical"
182 patterns of pain experienced after hip fracture. There was a general discussion on analgesic
183 medication, and its use specifically before walking practice. An emphasis was placed on
184 controlling pain but remaining active. Caregivers were encouraged to consult with the doctor and
185 nurses if pain persisted.

186 (4) *Mobilization after surgery* (5 minutes).^{16,19,20} This section generated discussion on early
187 mobilization (walking) and completion of ADLs 24 hours after surgery (if indicated). The
188 emphasis was on supporting older adults to do as much as possible, even though tasks may take

189 longer to complete in the first few days. The health professionals offered practical advice for
190 encouraging the return to independence in functional activities.

191 (5) *Rest* (2 minutes).¹⁶ This section emphasized the importance of rest in recovery: both rest periods
192 during the day and sleep hygiene at night.

193 (6) *Hydration and nutrition* (3 minutes). There was discussion on the importance of maintaining
194 adequate hydration and optimal nutrition to support the recovery process.

195 (7) *Supportive devices for ADLs and mobility* (5 minutes).¹⁹ Health professionals explained, with
196 examples, some ADL devices (e.g., long shoe horn, raised toilet seat, bath transfer bench) and
197 walking aids (e.g., walker, rollator, elbow crutches and cane).

198 (8) *Home environment recommendations* (5 minutes).^{16,19} Health professionals communicated the
199 importance of a safe home environment: one that supported older adults to move, but considered
200 reducing falls risk factors, such as encouraging the adoption of clear paths between rooms,
201 adequate handrails, and supportive lighting, for example.

202

203 **Part 2: Practice Session (30 - 40 minutes)**

204 This section of the workshop was to develop caregiver knowledge, skill and confidence to support their
205 family member/friend with hip fracture. An emphasis was placed on caregivers' watching their own
206 health and biomechanics to avoid back and other related injuries. The health professionals had a two
207 step-process of knowledge transfer and skill development. First, they explained the activity/exercise
208 (with one caregiver who volunteered to act as a "patient"). Following this, caregivers formed pairs
209 (dyads) to practice the activities. In these practice dyads, one caregiver took on the role of an older adult
210 with hip fracture, and the other was the caregiver. Then, the caregivers switched roles and completed the
211 activities again. This was done intentionally so that caregivers gained experience from different

212 perspectives. The health professionals circulated between the dyads and offered suggestions to improve
213 the delivery of care in a safe manner. Practical components included a demonstration and discussion of:
214 (1) moving/transferring in and out bed
215 (2) walking using different walking aids
216 (3) ascending and descending stairs
217 (4) basic ADLs (dressing, showering, bathing, etc.), and
218 (5) balance and strength exercises.

219

220 The workshop concluded with a group discussion on the material presented. Caregivers were also given
221 written materials and links to online videos and materials on the hospital web site (*blinded for per-*
222 *review*) to complement the workshop material.

223

224 **Statistical Analysis**

225 We calculated absolute and relative frequencies for categorical variables, and mean (standard deviation,
226 SD) for quantitative variables to present caregiver sociodemographic data, their knowledge about hip
227 fracture early mobilization and pain management, their concerns related to the care and recovery of their
228 relatives, and their rating for workshop utility and satisfaction. We conducted logistic regressions to
229 examine the influence of gender and employment of the caregivers in addition of previous functional
230 status of the patient upon the caregivers' level of concern about providing care to their family/friend and
231 their availability of time. For non-normally distributed data, we used the median (Q1, Q3). We used
232 Kolmogorov-Smirnov test to determine the normal distribution of the data. We used IBM SPSS
233 Statistics Version 20.0 (IBM Corp., Armonk, New York).

234

235 **RESULTS**

236 For the eight-month period we provided 42 sessions to 210 caregivers. There were 103 unique responses
237 from caregivers who attended the workshop, resulting in a 49% (103/210) response rate. Three
238 caregivers of 103 who filled out the questionnaire did not answer the question about their employment
239 and one of them did not select any option for gender. The average caregiver age was 52.1 (12.8) years;
240 their sociodemographic information and main concerns are provided in **Tables 1** and **2**. There were no
241 statistically significant explanatory variables for caregivers' concern about providing care ($p>0.05$).
242 However, when looking specifically at the amount of time required, there was concern based on
243 employment status. Caregivers who were employed are 3.16 times as likely to be concerned ($p=0.009$)
244 (**Table 3**).

245

246 Almost all of the caregivers (>90%) chose the appropriate answer to the three knowledge questions
247 related to mobility and pain. The median utility and satisfaction rating was 10 (10, 10). For perceptions
248 of both utility and satisfaction, eighty-one caregivers (78%) gave the maximum score (10 points), ten
249 caregivers (10%) rated them as 9/10, another ten caregivers rated them as 8/10 and 2 caregivers (2%)
250 rated them as 7/10.

251

252 Twenty-one caregivers answered the open-ended question about suggestions for improving future
253 workshops. Nine caregivers (43%) wrote that the workshop was good as is; eight caregivers (38%)
254 suggested that the workshop should be longer, with more time to practice in pairs, and more references
255 and informational links for recovery after hip fracture; two (9%) caregivers suggested the addition of
256 more resources for older adults requiring higher level of care (e.g., more dependence with completing
257 ADLs); one caregiver (5%) would include testimonies of people who previously recovered from hip
258 fracture; and another caregiver (5%) suggested that we include more information about how motivate
259 patients (**Table 4**).

260

261 **DISCUSSION**

262 Older adults with hip fracture and their family and friends experience significant burden. It is incumbent
263 upon health professionals and researchers to adopt a person-centered approach to appreciate these
264 challenges, and together, create appropriate knowledge products to support recovery. This study
265 describes the development and evaluation of a caregivers' instructional post-hip fracture workshop
266 delivered during the acute hospital admission. First, we highlight the workshop content, and feasibility
267 for delivering it, with high caregiver attendance. Second, we report a very high level of caregivers'
268 perceptions of workshop utility and satisfaction. Finally, we note caregivers received the intended key
269 workshop messages with >90% identifying appropriate responses to questions on rehabilitation practice
270 post-hip fracture. Taken together, this study provides one example for a person-centered education and
271 skill development workshop for family and friends to support older adults during hip fracture recovery.

272

273 The caregivers in this study shared many similar characteristics with previous literature. For example,
274 caregivers were at midlife,^{4,7,12,27} most were women,⁴⁻⁶ and they were primarily the adult children of
275 older adults with hip fracture.^{4,12,27} Due to the average age of an older adult with hip fracture (>80years),
276 it is not surprising that their children take on this role. Frequently, the spouse, if the same age, may be
277 unable to physically cope with the demands that may present on discharge home after hip fracture.⁴ Of
278 note, our study was set in Spain, and we observed a higher number of parent-daughter/daughter-in-law
279 dyads, which is most commonly report in the literature, globally.^{4,6,7,12} However, a noteworthy
280 difference in our study related to caregivers' employment status: especially important as the sessions
281 were held during the workday. In our study, we observed a high number of caregivers attending sessions
282 with approximately 39% who stated they were unemployed. In contrast, studies by Martin-Martin et
283 al.,²⁸ and Lin et al.,⁵ observed more than 60% of caregivers were unemployed. We are unsure why these

284 differences exist: it is possible that caregivers in the previous studies had to leave work to take on full-
285 time caregiving after the hip fracture,^{4,5} or the caregivers in our study had additional support (as the
286 patients were still in hospital) to continue work while provide caregiving. Alternatively, we do not know
287 the level of care required/provided in other studies, and this may account for the observed differences.
288 Despite the number of older adults who fracture their hip annually, we know (relatively) little about the
289 family and friends who care for them.^{6,29}

290

291 Several studies^{8,9,13,29} highlight caregivers' request for practical information, education, and training
292 during care transitions between hospital and home. To address these care gaps, Naham et al.,³⁰ designed
293 an online resource for caregivers in the US, while Martin-Martin et al., conducted a clinical trial in Spain
294 to train caregivers during the in-patient phase. Both studies^{4,30} observed increased knowledge of hip
295 fracture management, although one study reported some difficulties, such as recruitment¹⁴ and
296 caregivers' limited internet access.¹⁴ We observed a high level of knowledge related to the three main
297 messages we evaluated after the workshop (focus on early mobilization and pain management),
298 consistent with these studies.^{4,14} We designed our workshop using an iterative process and based on
299 feedback from key stakeholders, such health professionals and caregivers. Further, by bringing together
300 groups of caregivers with a common experience (an older adult with hip fracture) we provided the
301 opportunity for them to interact, ask questions and learn new skills to support them for caregiving. The
302 goal of our approach was to address the physical challenges that can occur during recovery, and possibly
303 create a socially supportive learning environment. In addition, including hands on skill development
304 strategies in dyads, we enacted the recommendations based on a systematic review²³ for delivering
305 information to caregivers of patients with stroke.²³

306

307 In this study, most caregivers (74%) expressed a high or very high concern for caring for their family
308 member or friend, after hospital discharge. Most (75%) reported apprehension for delivering physical
309 care to their family member/friend, followed by lack of time as the second most reported concern (more
310 likely if the caregiver was employed). This is in contrast to the work of Lin et al.,⁵ who noted the
311 availability of time was a higher problem than the financial issues or the family relationships, and
312 Siddiqui et al.,¹¹ who noted finances was the main cause of stress for the caregivers. The observed
313 differences may be explained by variations in social and health systems. In Spain, where our study
314 occurred, medical appointments, rehabilitation and transportation (to and from appointments) are
315 provided by the national health system, without incurring additional out-of-pocket expenses.

316

317 Providing care for a family member can pose many challenges. Almost 60% of caregivers in this study
318 rated their physical capacity as good or very good to assist their family member/friend following
319 discharge from hospital. Further, most believed that their family member would return to partial or full
320 independence in ADLs. Nonetheless, after the workshop caregivers were still concerned about managing
321 at home. This poses some interesting hypotheses around caregivers' skill development and self-efficacy.
322 A previous study⁵ noticed a negative correlation between caregiving self-efficacy and burden (that is,
323 the lower the self-efficacy the higher the burden) at one week and one month after hospital discharge. As
324 we explore options for improving the content and delivery of this caregiver workshop we recognize the
325 need to disentangle a person's perception of physical ability to complete a task (e.g., have the physical
326 strength and endurance to assist a family member with ADLs) from their self-efficacy to complete the
327 specific task.³¹ This is essential information to support self-management interventions, which goes
328 beyond just "teaching" family members/friends about hip fracture. Implementation of educational/skill
329 building workshops also require behavioral strategies.³² In a Canadian study¹⁷ of older adults with hip
330 fracture, we used a "teach back" technique to confirm participants' understanding of the gained

331 knowledge. This was also our approach for the current study's dyad skill practice. But to extend this
332 work we require better understanding of caregivers' self-efficacy, and mastery over time, of the newly
333 acquired information and skills. Of note, it was a caregiver in this study who requested assistance with
334 psychosocial factors related to their family member member/friend. This observation is a reminder that
335 understanding psychosocial constructs is essential for both the older adult and family member/friend. In
336 this way we could clarify factors that influence the caregiver burden,⁵ and address caregivers' and older
337 adults' with hip fracture potential anxieties and expectations.

338

339 The utility and satisfaction with the workshop was rated very high. Similar results were found by others
340 using different delivery mechanisms,^{15,30} with some notable differences. In a US study, an online
341 resource provided caregivers the opportunity to review information at a convenient time, while the hip
342 fracture toolkit intervention provided face-to-face and telephone contact with the older adult with hip
343 fracture.¹⁷ In our study, we specifically targeted caregivers to understand their knowledge and concerns
344 about returning home with their family member/friend. Future iterations should consider interventions
345 that target *both* the older adult with hip fracture and their caregivers. This multi-level approach ensures
346 consistency of messages delivered and received, and importantly, preserves the autonomy of older adults
347 with hip fracture to make informed decisions about their own care. What these studies highlight is that
348 there are a number of ways to deliver care. Our goal is to better understand, via understanding
349 implementation factors, "*what works for whom, under what conditions*".³³

350

351 **Study strengths and limitations**

352 The strengths of this study include addressing caregivers' knowledge, skills and concerns. We also
353 included the full mobility spectrum of older adults with hip fracture, with representation from the three
354 main groups of older adults who fracture their hip.³⁴ We also highlight the feasibility of recruiting

355 caregivers and delivering the intervention as intended- an important component given that other studies
356 note challenges recruiting caregivers.³⁵ But we also acknowledge our limitations. For example, we did
357 not do a pre-posttest of caregiver knowledge of hip fracture recovery. However, in the workshops most
358 caregivers expressed limited knowledge of hip fracture recovery. Second, we only captured information
359 from the caregivers and not the older adults with hip fracture. Future iterations of the workshop could
360 explore both perspectives. We recognize the caregivers who enrolled in this study were highly
361 motivated, and thus our results are not generalizable to all caregivers. Further, this study was set in
362 Spain, and may not easily translate to other countries due to differences in health care delivery systems.
363 Finally, this was a cross-sectional study design, thus we cannot make any inferences to causality.

364

365 **CONCLUSION**

366 We highlight the feasibility of an in-hospital instructional workshop for caregivers of older adults with
367 hip fracture. Caregivers rated the intervention as very useful, and expressed a high level of satisfaction.
368 We identified caregivers' concerns and opportunities for improving the workshop, in future. In
369 particular, we highlight that future workshops should address psychosocial elements within its delivery
370 mechanism (implementation factors) and include both caregivers and older adults with hip fracture,
371 either separate or together. A person-centered approach to health care delivery is paramount, and the
372 caregivers in this study provide an important contribution to understand how best to support the
373 recovery from hip fracture.

374

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Table 1. Sociodemographic data and perceptions of the caregivers.	
Variable	n=103
Age, y: mean (standard deviation, SD), minimum-maximum	52.1 (12.8), 18-85
Gender (n=102)*	
Women	70 (68.6%)
Men	32 (31.4%)
Relationship	
Daughter	44 (42.7%)
Son	22 (21.4%)
Other (sisters, brothers, sister- or brother-in-law)	12 (11.7%)
Partner/spouse	11 (10.7%)
Daughter-in -law/son-in-law	8 (7.8%)
Granddaughter/grandson	3 (2.9%)
Niece/nephew	3 (2.9%)
Employment (n=100)*	
Full-time	43 (43%)
Part-time	18 (18%)
Unemployed	39 (39%)
Caregivers' perceptions of family/friend's pre-fracture function	
Completely dependent	27 (26.2%)
Partially dependent	31 (30.1%)
Completely independent	45 (43.7%)
Values are presented as mean (standard deviation, SD) and minimum-maximum, or as number (percentage, %) depending on the variable. *missing data	

Table 2. Caregivers' perceptions of main concerns for hip fracture recovery for their family/friend.

Variable	n=103
Level of concern about providing care to family/friend	
Very High	34 (33%)
High	40 (38.8%)
Low	22 (21.4%)
None	7 (6.8%)
Caregivers' concerns/perceived difficulties for providing care for family/friend	
Supporting transfers, walking, functional activities	77 (74.8%)
Time	43 (41.7%)
Financial	17 (16.5%)
Family relationships	9 (8.7%)
Social relationships (friends, at work, etc.)	8 (7.8%)
Caregivers' expectations about functional recovery of family/friend 3 months post-surgery, n=102*	
Return to independence	30 (29.4%)
Almost independent, but with some difficulties, e.g., requires mobility aids for activities of daily living	36 (35.3%)
Requires a lot of support to complete activities of daily living	15 (14.7%)
Dependent in all activities of daily living	21 (20.6%)
Caregivers' self-perception of physical ability to provide care for family/friend	
Very poor	9 (8.7%)
Poor	33 (32%)
Good	44 (42.7%)
Very Good	17 (16.5%)
Responses are presented as number and percentage (%) of respondents. *Due to missing data	

Table 3. Logistic regression of the level of concern about the availability of time to provide care for family/friend (0= no, 1= yes), n= 103.

Variables	Crude OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Gender (Men)				
<i>Women</i>	1,32 [0,57 – 3,08]	0,52	1,29 [0,53 – 3,16]	0,58
Employment (Unemployed)				
<i>Employed</i>	3,2 [1,33 – 7,69]	0,009	3,16 [1,3 – 7,66]	0,011
Previous Functional level of the patient (Independent)				
<i>Dependent</i>	1,99 [0,9 – 4,41]	0,09	1,75 [0,76 – 4,05]	0,19

OR; Odds Ratio, CI; Confidence Interval

Table 4. Identified themes from participants on how to improve the workshop.

Themes	Comments
No improvement need	<p>“This session was very useful for me. I was not sure if I should come or not but now I’m happy with all the things that I have learn. We need more sessions like this one” (Wife, aged 68 years)</p> <p>“It's very complete, it's very good” (Wife, aged 62 years)</p>
More time and more information	<p>“The session should be longer. It would be very helpful if you could see us how we do the exercises and transfers (we are learning here) with our relatives. You would help us to correct what we do not do well” (Son, aged 64 years)</p> <p>“More references, links, type of messages and more examples” (Daughter, aged 60 years)</p>
More information focused on people who are completely dependent	<p>What social aids are there for people who are completely dependent? (Daughter, aged 54 years)</p>
Testimonials	<p>“I would include personal experiences of persons who had a hip fracture and they have gone through the same situation.” (Daughter, aged 43 years)</p>

Psychological support

“I would have like to have more information about how to encourage and motivate my father because he is a bit depressed here at the hospital and I’m not sure that he will be the same person that he was before the fracture”. (Son, aged 46 years)