Patterns of Informal Family Care During Acute Hospitalization of Older Adults from Different Ethno-Cultural Groups in Israel.

Ksenya Shulyaev (✉ Ks.Shulyaeva@gmail.com)
University of Haifa Faculty of Social Welfare and Health Sciences  https://orcid.org/0000-0001-6548-6505

Nurit Gur-Yaish
Oranim Academic College

Efrat Shadmi
University of Haifa Faculty of Social Welfare and Health Sciences

Anna Zisberg
University of Haifa Faculty of Social Welfare and Health Sciences

Research

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Abstract

Introduction Informal caregiving during hospitalization of older adults is significantly related to hospital processes and patient outcomes. Studies in the home settings demonstrate that ethno-cultural background is related to various aspects of informal caregiving; however, this association in the hospital setting was insufficiently researched.

Objectives Our study looked for differences between ethno-cultural groups in the amount and kind of informal support they provided for older adults during hospitalization.

Methods This study is a secondary data analysis of two cohort studies conducted in Israeli hospitals. Hospitalized older adults were divided into three groups: Israeli-born and veteran immigrant Jews, Arabs, and Jewish immigrants from the Former Soviet Union (FSU).

Results Informal caregivers of "FSU immigrants" stayed less hours during the day in both cohorts, were less present during the night in study 1, and provided less supervision of medical care in study 2, in comparison to the two other groups. Findings from study 1 also suggested that informal caregivers of “Arab” older adults were more likely to stay during the night in comparison to the two other groups.

Conclusion Ethno cultural groups differ in terms of the patterns of caregiving older adults during hospitalization. Health care professionals should be aware of these patterns and the cultural norms that are related to caregiving practices for better cooperation between informal and formal caregivers of older adults.

Background

When older adults are hospitalized, family members and friends commonly provide care and support. International data show that 77 to 96% of older adults are accompanied by family caregivers during a hospital stay, and these caregivers stay in the hospital for an average of five hours per day [1–3]. They provide various types of support: instrumental support (help with eating, bathing, and other activities of daily living), supervision of instrumental support given by hospital staff, ensuring/supervision of medical care, and psychological support [4]. These types of support have been related to patients’ clinical and personal characteristics [5]. For example, patients with lower functioning levels require more instrumental care, while those with anxiety require more psychological support [4].

Results of recent studies show that family caregiving is related to both the in-hospital processes of care and the health outcomes of older adults. For example, it is associated with eating and walking during hospitalization [6], adherence to treatment [7, 8], level of depressive symptoms [9], functional decline [10], length of stay in hospital, re-hospitalization, and mortality [11, 12]. Therefore, understanding the patterns and characteristics of family caregiving may help to optimize the processes of care and minimize the negative effects of hospitalization on older adults.

Patients’ and families’ ethno-cultural backgrounds are known to play a role outside the hospital. Ethno-cultural groups differ in their norms, values, and attitudes to supporting older adults [13–17]. Studies in home care settings suggest these differences are manifested in the scope and diversity of family caregivers’ networks, the amount of time they provide care, their resources and level of burden [18–20]. However, the association between ethno-cultural background and various aspects of informal care may differ in the hospital setting. First, hospitalization balances two cultural contexts of care, the personal and the organizational context, and this balance may be difficult to achieve for patients and caregivers from minority groups [21, 22]. Second, the stressful aspects of hospitalization might impose different coping strategies on different ethno-cultural groups. For example, studies show that an avoidant coping strategy is salient in caregivers in some groups (i.e., African Americans) but not others (i.e., Korean-origin caregivers) [23]. This
suggests the need to investigate the degree to which ethno-cultural groups differ in the provision of family caregiving in the unique context of the hospital.

Israeli society includes a variety of national, religious, secular and ethnically unique population groups and, as such, provides an ideal setting for this type of study. We focused on Arabs, Jewish immigrants from the Former Soviet Union (FSU), and Israeli-born or veteran immigrant Jews, defining veterans as those arriving before 1989, when major flows from FSU began. Arabs and FSU immigrants comprise the largest minority groups in the Israeli older adult population (13% and 18.8%, respectively) [24]. The decision to study these three groups was based on the cultural diversity and distinctiveness of their family cultures [25], attitudes to older adults [26] and intergenerational relationships [27, 28], expectations and patterns of in-home support [29], and utilization of health care services [30, 31]. These differences have been established in home care settings, but to the best of our knowledge, only one study has examined ethnocultural aspects of caregiving during hospitalization. This study suggested patients from the FSU were less likely to have informal caregivers visit them during the hospital stay than Israeli-born or veteran immigrant Jews and Arabs [32].

**Objectives**

Our study looked for differences between these three groups in the amount and kind of informal support they provided for older adults during hospitalization. Specifically, we hypothesized there would be differences in the number of hours of family caregivers visited patients during the day and in whether family caregivers stayed with patients during the night. We also hypothesized differences in the kind of support provided, i.e., in instrumental support, supervision of instrumental support, ensuring/supervision of medical care, and psychological support. These differences will be significant after controlling of clinical and personal characteristics of patients.

**Methods**

**Study design and Settings**

This study was a secondary data analysis of two cohort studies conducted in internal medicine units in hospitals in the northern part of Israel. We used unrelated cohorts from two different studies with a similar methodology, but in different hospitals and different populations, so that we could identify persistent cultural patterns in informal caregiving during hospitalization. The first study was the BLINDED FOR REVIEW study conducted in two hospitals in a large city (around 280,000 citizens) from February 2009 to August 2011 (BLINDED FOR REVIEW). The second was the BLINDED FOR REVIEW intervention BLINDED FOR REVIEW study (including intervention and control groups), conducted in one hospital in a peripheral city (around 40,000 citizens) from October 2015 to September 2016 BLINDED FOR REVIEW. These hospitals serve diverse population groups, and each has unique characteristics related to the urban / rural communities surrounding it.

**Participants**

The two studies’ populations included older adults urgently admitted for non-disabling diagnoses who were able to communicate in Hebrew, Russian, or Arabic and were able to walk two weeks before hospitalization. Only cognitively competent patients (scoring 5 or above on Pfeiffer's Short Portable Mental Status Questionnaire (SPMSQ) [34] participated.

**Validation and Ethics**

All questionnaires were written in Hebrew and then translated into Russian and Arabic. To ensure the same intended meaning of each element of each questionnaire remained intact in the Russian and Arabic versions, two Hebrew-Russian and Hebrew-Arabic speakers independently translated questionnaires and two others did a back-translation.
Items showing change after translation were discussed until an equivalent meaning was reached in both languages. Revised items were translated into Hebrew and again compared. The studies were approved by the Ethics Committees of the hospitals and by University review board. All participants provided informed consent, and participation was voluntary and confidential.

**Statistical Analyses**

Means and SDs were computed for all continuous study variables. The associations between the independent variables, the dependent variable, and the control variables were examined using UNIANCOVA and linear and logistic regression analyses. Because of the multiple tests, we ran a Bonferroni correction for the significance of the models. All $p$-values remained below .05. In all analyses, we controlled for the following: age, gender, family status, and number of children; cognitive, functional, and psychological (anxiety and depression) status; economic status; length of stay; and comorbidity. All analyses were conducted using IBM SPSS Statistics version 24.

**Study 1**

**Methods**

**Participants**

Out of 1042 older patients who met the inclusion criteria of the initial studies, 241 had no information on family caregiving, and 139 were excluded because of low cognitive status, resulting in a final sample of 662 participants. The functional status before hospitalization, number of children, education, perceived economic status, family status, level of depression and anxiety, gender, and length of hospital stay of the excluded participants did not differ significantly from those of participants retained in the final sample. However, the excluded individuals were older ($p<.05$), had lower cognitive status ($p<.05$), and a higher level of comorbidity ($p<.05$).

**Measures**

Informal support was assessed with the ICHOA, the Informal Caregiving for Hospitalized Older Adults scale [4]. This measure consists of four subscales: instrumental support (e.g. help with eating or grooming), supervision of instrumental support (e.g. making sure staff help with eating), ensuring/supervision of medical care (e.g. keeping an eye on medical care or discussing condition with medical staff), and psychological support (e.g. comforting patients when sad or helping them get used to hospital). All subscales include 3-6 items evaluated on a Likert-type response scale from 1 (*did not receive any help*) to 5 (*received help all the time*). For this study, the reliability of scale items was good (from $\alpha=.83$ to $\alpha=.88$). Length of family caregivers' visits during the day was self-reported by patients and measured in hours. Family caregiver stay during the night was dichotomized as 0 (*did not stay with the patient during the night*) and 1 (*accompanied during the night for at least four hours*).

**Ethno-Cultural Groups**

Participants were divided into three ethno-cultural groups according to their self-identified native language (Hebrew, Arabic, or Russian), religion (Jews, Christian, or Muslim), country of birth (Israel, USSR, or other countries), and year of immigration (before or after 1989, with the former considered veteran immigrants). The three groups were as follows: (1) "Jews", Israeli-born with Hebrew as a mother language and/or veteran immigrants arriving before 1989; (2) "Arabs", Israeli-born with Arabic as a mother language and Christian or Muslim religion; (3) "FSU immigrants", immigrants to Israel from FSU with Russian as their native language.

**Background Characteristics**

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Sociodemographic variables and variables related to functional, cognitive, psychological, and health status were included in the data analysis as potential confounders. **Functional status** on admission was assessed using the 11-item Modified Barthel Index (MBI) [35], consisting of individuals’ self-assessment of their independence performing basic activities of daily living (ADLs). **Cognitive status** was measured using the Pfeiffer Short Portable Mental Status Questionnaire (SPMSQ) [34]. In this questionnaire, total scores range from 0 to 10; higher scores indicate better cognitive status. **Level of anxiety** was assessed using the Short Anxiety Screening Test (SAST) [36] a 10-item, 4-point Likert-scale questionnaire; anxiety is defined as receiving 24 points or more. **Level of depression** was measured using the 10-item Short Zung Interviewer Assisted Depression Rating Scale (Short Zung IDS) [37]. Responses are rated on a 4-point scale with the total score recoded from 0 to 75; depression is defined as scoring 70 points or more on the scale. **Severity of chronic health condition** was assessed using Charlson's comorbidity index; the index weights 20 health conditions and their severity on a scale from 1 to 6 [38]. Sociodemographic variables: age, gender, family status, number of children and economic status were also included. Economic status was estimated by self-report on a scale from 1 (worst) to 5 (best).

**Procedure**

Functional and cognitive status, as well as background characteristics, were assessed within the first 24 hours of hospital admission. In-hospital informal support was assessed via in-person interviews at the end of hospitalization. Data on chronic morbidity and length of stay were retrieved from the hospitals’ electronic medical records.

**Results**

**Participants’ Characteristics**

The mean age of participants was 78.1 (SD = 5.7); half were male (51.4%, N = 340), and half were married (54.7%, N = 362). The mean number of children was 2.8 (SD = 2.1). Average cognitive and functional statuses were relatively high, indicating a mostly independent sample (cognitive status, M = 8.7, SD = 1.5; functional status before hospitalization, M = 91.7, SD = 15.4). About one fifth screened positively for anxiety (16.8%, N = 110) and depression (20%, N = 131). Subjective economic status of most participants was "like others" (42.1%, N=270) or higher (39.3%, N=252). Average length of hospital stay was 6.3 days (SD = 5.2). Average comorbidity score was 2.5 (SD = 2.1) (see Table 1.1).

**Preliminary Analysis**

All background characteristics (age, gender, family status, number of children, and functional, cognitive, psychological, and health status) were significantly related to at least one of the study variables and thus were included as control variables.

**Ethno-Cultural Sample Characteristics**

The majority of participants were non- or veteran immigrant Jews (63.5%, N=420); more than a quarter were “FSU immigrants” (30.5%, N=202); and 6% (N=40) were "Arabs".

**Informal Caregiving during Hospitalization**

**Hours of day visits.** Almost all participants (97%, N= 622) were accompanied by family caregivers during their hospitalization. The average length of day visits was 4.7 hours (SD=3.5).

**Night stay.** Only 7.9 % of participants (N=52) were accompanied by their family caregivers during the night (“stay” was defined as at least four hours).
**Type of support.** Less than half of the participants (34.3%) received any instrumental support from their family caregivers during hospitalization, and only 11.6% reported that their family caregivers supervised instrumental support from the hospital staff. Psychological support was the most prevalent: 94.5% of hospitalized elders reported receiving this kind of support from family caregivers during hospitalization. The majority (83.1%) reported their family caregivers ensured/supervised medical care.

**Ethno-Cultural Differences in Informal Caregiving**

**Hours of day visits.** UNIANCOVA analyses controlling all covariates revealed significant differences between the ethno-cultural groups (F(2, 615)=13.86, p<.0005). Bonferroni post-hoc analysis found the “FSU immigrants” had the shortest visits (estimated average 3.6 hours per day), shorter than “Jews” (5.2 hours per day, p<.0005) and “Arabs” (5.7 hours per day, p=.007) (Table 1.2).

**Night stay.** Logistic regression analysis showed “Arabs” were more likely to be accompanied by family caregivers during night hours than “Jews” (OR=3.12; CI 95% (1.03-9.41); p=.044) or “FSU immigrants” (OR=7.32; CI 95% (1.62-33.0); p=.01).

**Differences in kinds of support.** Linear regressions showed “FSU immigrants” received significantly more psychological support from family caregivers than “Jews” (Beta = .11, t (628) = 2.73, p = .007). There were no significant differences between the three ethno-cultural groups in other kinds of informal support (Table 1.2).

**Study 2**

**Methods**

**Procedure**

Functional and cognitive status, background characteristics, chronic morbidity, and length of stay were assessed as in Study 1, applying the same instruments. In-hospital informal support was assessed using in-person daily interviews (up to three follow-up interviews during the hospital stay, M-days of follow-ups = 2.17, SD = .84).

**Participants**

The participants’ recruitment and dropout process was described previously (Cohen, 2018). Out of 401 older patients who met the inclusion criteria of the initial study, 14 had no information about family caregiving, resulting in a final sample of 387 participants. Excluded participants were comparable to participants retained in the final sample in the following: age, gender, family status, and number of children; functional and psychological (anxiety and depression) status; economic status; comorbidity. However, excluded individuals had a shorter hospital stay (p<.05) and lower cognitive status (p<.05).

**Measures**

**Informal support** was assessed with the ICHOA, the Informal Caregiving for Hospitalized Older Adults scale [4]. The reliability of subscales in the current study was from $\alpha=.84$ to $\alpha=.89$ in the three follow ups. The length of family caregivers’ visits during the days and the night stay were estimated as in Study 1. The total support received by patients was computed as the mean of up to three follow-ups.

**Ethno-cultural groups.** Participants were divided into the three ethno-cultural groups described in Study 1.
Background characteristics. The following variables were assessed as in Study 1: age, gender, family status, and number of children; cognitive and functional status; length of hospital stay; comorbidity. Psychological status was measured using the Hospital Anxiety and Depression Scale (HADS). HADS includes two subscales: anxiety and depression. Each contains seven items. These were rated from 0 to 3, and the total score was dichotomized according to the cut-point [39]. Economic status was self-reported on the following subjective 3-point scale: “If the average income of a family in Israel is 10000 NIS, your income is higher than average (1), similar to average (2), or lower than average (3)”. We also controlled for participation in the larger study’s intervention group to make sure that being in the intervention did not affect the results in any way.

Results

Participants’ Characteristics

The mean age of participants was 75.4 (SD = 7.1). Most were male (59.9%, N = 232), and most were married (58.4%, N = 226). The mean number of children was 4.8 (SD = 3.0). The average cognitive and functional statuses were relatively high, (cognitive status $M = 9.1, SD = 1.4$; functional status, $M = 89.6, SD = 16.0$). About one fifth suffered from anxiety (22.5%, $N = 87$) and about one third from depression (34.1%, $N = 132$). The self-reported economic status of the majority of participants was “lower than average” (84.8%). Average length of hospital stay was 6.2 days (SD = 3.7), and average comorbidity score was 2.2 (SD=1.9) (Table 2.1).

Preliminary Analysis

All background characteristics (age, gender, family status, and number of children, as well as functional, cognitive, psychological, and physical health status) were significantly related to at least one of the study variables and thus were included as control variables.

Ethno-Cultural Sample Characteristics

About half of the participants were “Jews” (54.0%, N=209) and about a third were “Arabs” (32.8%, N=127). Only 13.2% (N=51) were “FSU immigrants”.

Informal Caregiving during Hospitalization

Hours of day visits. Almost all participants (98.4%, N= 381) had at least one visit from family members or friends during the first three days of their hospital stay. The average length of the day visit was 6.6 hours (SD=3.6).

Night stay. Only 16.0 % of the participants (N=62) were accompanied by their family caregivers during the night (“stay” was defined as at least four hours).

Type of support. More than half of the participants (58.7%) received instrumental support from their family caregivers during hospitalization, and a similar share (61.2%) received supervision of instrumental support from hospital staff. Psychological support was most prevalent: 97.4% of hospitalized elders reported this kind of support from family and friends during hospitalization. The majority (91.5%) reported their family caregivers ensured/supervised medical care.

Ethno-Cultural Differences in Informal Caregiving

Hours of day visits. UNIANCOVA analyses controlling for all covariates revealed significant differences between the ethno-cultural groups ($F (2, 466) = 4.03, p=.019$). Bonferroni post-hoc analysis showed “FSU immigrants” had the shortest visits (estimated average 5.2 hours per day) compared to “Jews” (6.6 hours per day, $p=.038$) and “Arabs” (7.2 hours per day, $p=.015$).
Night stay.

No statistically significant associations were found between ethno-cultural groups and the possibility of family caregivers' night stay.

Differences in types of support. Multivariate linear regression analyses, including all relevant covariates, showed the category “FSU immigrants” was significantly associated with receiving a smaller amount of ensuring/supervision medical treatment than “Jews” (Beta = -.18, t (379) = -3.30, p = .001) or “Arabs” (Beta = -.14, t (379) = -1.93, p = .055). “FSU immigrants” were also significantly less likely to receive psychological support from their family caregivers than “Jews” (Beta = -.18, t (379) = -3.24, p = .001) or “Arabs” (Beta = -.19, t (379) = -2.72, p = .007).

Discussion

Our study investigated differences in the amount and kind of informal support provided for older Israeli adults during hospitalization, comparing three cultural / ethnic groups that we labeled “Jews” (i.e., Israeli-born Jews or veteran immigrants), “Arabs”, and “FSU immigrants”. Our analysis of unrelated cohorts in different medical centers reveals similar results regarding patterns of caregiving in these three ethno-cultural groups. Results of these studies suggest that the most different group in providing informal support during hospitalization of older adults is “FSU immigrants”.

Informal “FSU immigrants” caregivers stayed fewer hours during the day and were less present at the night in Study 1 than either “Jews” or “Arabs”. A previous study similarly found that FSU immigrants were less often accompanied by family caregivers in the hospital [32]. Our study extended this finding by showing they were less accompanied during the night and had shorter visits from family caregivers during the day. This can be explained in a number of ways. Jewish Soviet families have traditionally been characterized as having strong family ties and providing functional support [40]. It is possible, then, that FSU family caregivers perceive the hospital visit time as functional. Thus, they may bring necessary equipment or a favorite food, but they do not spend extra time in the hospital [41]. It is also possible that FSU immigrants and their family caregivers are used to the paternalist characteristics of Soviet society and its medical system [42]. In the Soviet system, the hospital staff takes full responsibility for a patient's condition, and family caregivers are forbidden to visit patients during hospitalization, except during certain daytime hours. Even if family caregivers of elderly patients immigrated in childhood or were born in Israel, they might share the norms of their country of origin [43].

In Study 2, “FSU immigrants” also provided less ensuring/ supervision of medical care than the two other groups. This could reflect difficulties communicating with hospital staff; FSU immigrants and their family caregivers may be less fluent in Hebrew. Family caregivers (especially the older generation) may also feel uncomfortable discussing the patient's condition with the medical staff. The important role should have cultural competence of healthcare workers [44].

Study 1 demonstrated that family caregivers of the “Arab” older adults were more likely to stay during the night than the two other ethno-cultural groups. This could be related to the Arabic cultural tradition of respect for older adults. Despite modernization and ongoing changes, adult children in Arab-Israeli society still show relatively high levels of filial piety - a cultural norm that encourages care for parental wellbeing [45]. Another possible explanation is the extension of family support networks in Arabic families to include larger families with more children, friends, and neighbors. Members of these extended networks often help to care for older adults [28], a tendency likely to appear in the hospital setting.

There were no differences between the ethno-cultural groups in instrumental and supervision of instrumental support in either study. It seems the involvement of family caregivers in these types of support is more determined by the functional and health condition of the patient than by cultural norms and patterns.
Interestingly, the studies had opposite findings for psychological support. The results of Study 2 are in line with other work finding immigrants from the FSU receive less help. However, in Study 1, immigrants from the FSU reported receiving more psychological support than Israeli-born and veteran immigrant Jews. It is possible that psychological support was sensitive to the contexts of the different hospitals included in the present work. Future studies could include qualitative data and investigate the meaning of psychological support in different cultures and hospitals.

The main limitation of this research was that information on informal caregiving during hospitalization was self-reported by patients. Future work should take a dyadic perspective and include the point of view of family caregivers as well.

**Conclusion and Implications**

This study has some important practical implications. FSU immigrants seem to receive less support during hospitalization than other ethno-cultural groups; this may fall short of the implicit expectations of Israeli health and social care workers [41]. Health care professionals should be aware of the cultural norms affecting these behaviors. This awareness, in turn, could help to build mutual understanding, ensure cooperation between family and formal caregivers of older adults, and lead to clearer role distribution and better quality of care.

FSU immigrants often receive language-discordant medical care [46], and their family caregivers should ideally act as a bridge between the patient and the medical system to increase patients’ health literacy and improve hospitalization outcomes [47, 48]. However, our results suggest their family caregivers are less able to fulfill this role and may experience difficulties because of language and cultural gaps.

Our results emphasize the need for greater awareness among health workers of the characteristics of ethno-cultural groups, so they can provide culture-appropriate care and pay attention to cultural issues when communicating with family caregivers.

**Declaration Of Conflicting Interests**

The Authors declares that there is no conflict of interest

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Tables

Table 1.1 Study 1: Participants’ characteristics (N=801)
### Baseline characteristics

|                                | M (SD)   | N (%)    |
|--------------------------------|----------|----------|
| **Age**                        | 78.1 (5.7) |          |
| **Gender: Male**               | 340 (51.4%) |         |
| **Family status: Married**     | 362 (54.7%) |         |
| **Number of children**         | 2.8 (2.1)   |          |
| **Cognitive status: SPMSQ (0-10)** | 8.7 (1.5)  |          |
| **Functional status 2 weeks before hospitalization: MBI (0-100)** | 91.7 (15.4) |          |
| **Anxiety: SAST (10-40)**      | 19.1 (5.3)  | 110 (16.8%) |
| **Depression: Short Zung IDS (25-100)** | 52.3 (15.27) | 131 (20.0%) |
| **Economic status (1-5)**      | 3.2 (1.0)   |          |
| **Length of stay in hospital (days)** | 6.3 (5.2)   |          |
| **Comorbidity score: Charlson (0-22)** | 2.5 (2.1)   |          |

### Study variables

|                                | M (SD)   | N (%)    |
|--------------------------------|----------|----------|
| **Day visit (hours)**          | 4.7 (3.5) | 622 (97%) |
| **Night visit (more than 4 hours)** | 52 (7.9%) |          |
| **Instrumental support (1-5)** | 1.7 (1.2) | 229 (34.3%) |
| **Supervision instrumental support (1-5)** | 1.2 (0.8) | 77 (11.6%) |
| **Ensuring/supervision medical care (1-5)** | 3.2 (1.5) | 551 (83.1%) |
| **Psychological support (1-5)** | 4.0 (1.3) | 624 (94.5%) |

SPMSQ, Pfeiffer Short Portable Mental Status Questionnaire; MBI, Modified Barthel Index; SAST, Short Anxiety Screening Test; Short Zung IDS, Short Zung Interviewer Assisted Depression Rating Scale

**Table 1.2** *Study 1: Ethno-cultural differences in informal caregiving (N=801)*
|                       | "Jews" (N=503) | "Arabs" (N=67) | "FSU immigrants" (N=231) |
|-----------------------|----------------|---------------|--------------------------|
| Day visit (hours)     | 5.9 (0.2)³     | 6.4 (0.5)²    | 4.3 (0.3)²,³             |
| Instrumental support (1-5) | 2.0 (0.1)     | 2.1 (0.2)     | 2.0 (0.1)                |
| Supervision instrumental support (1-5) | 1.4 (0.04)    | 1.3 (0.1)     | 1.3 (0.1)                |
| Ensuring/supervision medical care (1-5) | 3.5 (0.1)     | 3.1 (0.2)     | 3.3 (0.1)                |
| Psychological support (1-5) | 4.0 (0.1)²    | 3.9 (0.2)¹    | 4.3 (0.1)¹,²             |

¹ p<0.05; ² p<0.01; ³ p<0.001

* Adjusted for covariates: age, gender, family status, number of children; cognitive, functional, psychological (anxiety and depression), and economic status; length of stay; comorbidity

**Table 2.1 Study 2: Participants’ characteristics (N=387)**

|                       | M (SD) | N (%) |
|-----------------------|--------|-------|
| **Baseline characteristics** |        |       |
| Age                   | 75.4 (7.1) |       |
| Gender: Male          | 232 (59.9%)  |       |
| Family status: Married | 226 (58.4%)  |       |
| Number of children    | 4.8 (3.0)   |       |
| Cognitive status: SPMSQ (0-10) | 9.1 (1.4)   |       |
| Functional status 2 weeks before hospitalization: MBI (0-100) | 89.6 (16.0) |       |
| Anxiety: HADS (0-21)  | 6.5 (4.7)   | 87 (22.5%) |
| Depression: HADS (0-21)| 9.2 (3.4)    | 132 (34.1%) |
| Economic status: lower than average | 340 (84.8%) |       |
| Length of stay in hospital (days) | 6.2 (3.7) |       |
| Comorbidity score: Charlson (0-22) | 2.2 (1.9) |       |
| **Study variables**   |        |       |
| Day visit (hours)     | 6.6 (3.6)   | 382 (98.4%) |
| Night visit (more than 4 hours) | 62 (16.0%)  |       |
| Instrumental support (1-5) | 2.1 (1.2)    | 227 (58.7%) |
| Supervision instrumental support (1-5) | 2.0 (1.5)   | 237 (61.2%) |
| Ensuring/supervision medical care (1-5) | 3.5 (1.3)    | 354 (91.5%) |
| Psychological support (1-5) | 3.7 (1.0)    | 377 (97.4%) |
SPMSQ, Pfeiffer Short Portable Mental Status Questionnaire; MBI, Modified Barthel Index; HADS, Hospital Anxiety and Depression Scale

### Table 2.2 Study 2: Ethno-cultural differences in informal caregiving (N=387)

|                          | "Jews" (N=209) | "Arabs" (N=127) | "FSU immigrants" (N=51) |
|--------------------------|----------------|----------------|-------------------------|
| Day visit (hours)        | 6.6 (0.2)      | 7.2 (0.4)      | 5.2 (0.5)               |
| Instrumental support (1-5)| 2.0 (0.1)      | 2.1 (0.1)      | 1.8 (0.1)               |
| Supervision instrumental support (1-5) | 2.0 (0.1)      | 2.1 (0.1)      | 1.6 (0.2)               |
| Ensuring/supervision medical care (1-5) | 3.5 (0.1)      | 3.7 (0.1)      | 2.7 (0.2)               |
| Psychological support (1-5) | 3.8 (0.2)      | 3.8 (0.1)      | 3.0 (0.2)               |

1 \( p<0.05 \); 2 \( p<0.01 \);

* Adjusted for covariates: age, gender, family status, number of children; cognitive, functional, psychological (anxiety and depression), and economic status; length of stay; comorbidity; participating in intervention.