BMC Geriatrics

RESEARCH Open Access

Examining the matching of care preferences and care modalities for older dependents, and its association with satisfaction and wellbeing

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Abstract

Background As societies age, ensuring the quality of life of dependent individuals has become a pressing concern, affecting an increasing large segment of the population. Understanding whether dependent individuals receive the type of care they prefer is central to their well-being. However, there is limited evidence regarding the alignment between care preferences and the care arrangements received by dependent persons. This article aims to provide new insights into how individual and contextual factors are associated to the match -or mismatch- between care preferences and current care arrangements, as well as its implications for individuals' well-being and satisfaction with care.

Methods We use data from the *2023 Survey of Older People with Functional Dependency*, which includes a representative sample ($n = 1{,}600$, with 992 self-respondents) of dependent individuals aged 65 and over in Barcelona, Spain. Logistic regression models are used to estimate the associations between dependent individuals' characteristics and their care preferences, as well as the matching between these preferences and their current care arrangements. We further examine how this alignment relates to satisfaction and well-being.

Results Care preferences differ based on sex, household size, level of dependency, and household income. Approximately 70 per cent of older dependents report that their current care arrangements do not match their care preferences. Older dependent women and those over 85 are less likely to have care arrangements aligned with their preferences. Living with others in the household increases the likelihood of alignment between preferences and care provision. While no significant association was found between alignment and well-being indicators, we observed that care match enhances individuals' satisfaction with care they receive.

Conclusions Older dependent individuals' preferences for care provision often do not match their current care arrangements. Both individual and contextual factors could explain this phenomenon. The widespread preference for receiving care at home highlights the need for social policies that promote home-based solutions. As family

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support for dependent individuals becomes less available, and given the significant burden this may place for family caregivers, there is a growing need to develop flexible, personalized, and sustainable care strategies.

Keywords Older dependents, Caregiving, Home care, Preferences, Formal care, And informal care

Introduction

Caring for older people is becoming increasingly central in many societies, given both their growing number and extended period of dependency. Care services aim at maintaining certain levels of quality of life for dependent persons, but the choice of care option is a complex, dynamic social process that is influenced by a multitude of factors [1, 2]. Although evidence indicates that most of the older people prefer to remain at home, even with varying levels of disability [2], there is limited information regarding the specific types of care arrangements older dependents prefer.

According to Kane & Kane [3] "the research on the long-term care preferences of older persons is sparse and confusing". This scarcity of studies becomes more pronounced when investigating the alignment between dependents' care preferences and the care they actually receive [4]. There are some findings, however, that consistently emerge across studies. For instance, family caregiving and "aging in place" are frequently preferred scenarios for older dependents, as highlighted in recent academic reviews [5, 6]. Older people express a strong aversion to entering nursing homes [7], although in certain cases of severe dependency, some older adults may not be able to afford the necessary changes in their homes to meet their needs, which consequently increase the likelihood of entering a nursing care facility [8]. In addition, the residential preferences may vary depending on expected health conditions [9]. Despite the systematic reviews by de Jong et al. [6] and Lehnert et al. [5] indicating a strong preference for informal or home-based care, preferences shift towards more formal care arrangements as dependency levels increase.

Boland et al. [10] suggest that the location of care may have an influence on health and wellbeing. Despite the heterogeneity in their findings, their review indicates significant positive health impacts of home support interventions for community dwelling older adults compared to independent living at home. However, they did not find strong evidence regarding the health impacts of other types of care.

The relationship between the typologies of dependents, household characteristics and care preferences remains inconclusive due to variations in how studies operationalize long-term care and measure preferences. Indeed, de Jong et al. [6] and Lehnert et al. [5] highlight substantial methodological heterogeneity in their reviews of 66 and 59 published studies, respectively. For instance, some studies categorize care preferences based on the place where support is received. This includes studies comparing preferences among older adults across different living situations such as "community", "sharing dwelling", "at home", "relatives or children's home", "nursing home" care, or other institutions [9, 11]. Other studies focus on the types of care and caregivers to determine preferences, using categories of care such as "informal", "formal", "family" care, and "non-kin" care. In some cases, family care is further disaggregated by each type of family member, and other groupings [12, 13]. Other researchers use a combination of both approaches [14, 15], and account for some heterogeneity in how preferences are elicited. Some studies use hypothetical scenarios to assess preferences in either first or third person [4, 16], while others focus on current preferences based on the dependant situation or disability [17]. Further studies make use of a rather more indirect approach by confronting individuals with a series of statements and asking them to provide their level of dis/agreement on a semantic scale [18, 19]. Overall, studies asking for current self-preferences are more common among subjects already receiving some kind of care support, experiencing any level of dependency, or requiring long-term care.

In the literature, we find different theoretical frameworks to explain which elements influence preferences in care. Some focus on the environment as the main determinant, such as the Person–Environment Fit: The Competence-Press Model [20]. Other models are more behavior-oriented, such as the Living Systems Framework [21] or the Self-Determination Theory [22]. Some authors have further proposed additional models as a result of integrating previous proposals [23]. In this study, we consider that the Andersen's Behavioural Model (ABM) to be the most suitable for classifying the determinants of both the use of care services and the preferences of dependent older adults. The ABM explores the individual and social determinants of health service utilization [24] and has been extended to examine the relationship between personal choices and health or care services utilization [25, 26]. The ABM classifies the variables influencing health and care service use into three types of factors: predisposing factors, enabling factors and the need factors [6, 26]. *Predisposing factors* include demographic and social characteristics (such as age, sex, or nationality). *Enabling factors* refer to various resources that facilitate individual utilization of available care services (e.g., income, number of children, or intergenerational relationships). And, finally, *need factors*, corresponding to perceived or actual

health and care necessities (e.g., professional evaluations, self-rated health, or other health status indicators).

Studies on the care preferences of older adults underline the critical role of both individual and contextual factors. Some published research emphasizes the relevance of living arrangements [4], gender [27], level of education [9, 15], financial status [9], and the rural-urban context [28, 29] in elucidating care preferences. However, few articles explore the relationship between preferences and the current situation and, thereafter, which characteristics influence the likelihood of a match or a mismatch. Kasper et al. [4] conducted a prominent study in this regard, revealing that "aging in place" remains the care preference among most of older adults. Furthermore, they disclosed that individuals aged 85 or older were more likely to have care arrangements that matched their preferences than those aged 65–74. Similarly, individuals with a high school education were less likely than their more educated counterparts to have care arrangements that matched their preferences. The authors also noted differences based on living arrangements, with a lower likelihood of match among those living with a child compared to those living with a spouse. However, they did not find significant differences according to gender, marital status and income. It is important to mention that Kasper's et al. [4] did not focus on current personal preferences. Instead, preferences were gathered by presenting a hypothetical scenario involving a third person with a high level of dependency.

In addition, Kasper et al. [4] found no relation between experiencing a mismatch and quality of life indicators, including subjective well-being, satisfaction with living arrangement, and participation restrictions (for example, visiting with friends/family, attending religious services, participating in clubs, classes, or other organized activities, leisure activities, working, or volunteering). In contrast, some previous work has shown that congruence between preferences and personal needs can positively influence satisfaction (across various domains) and psychological well-being. As evidenced by Kahana et al. [20], experiencing a mismatch may result in higher levels of stress and dissatisfaction. Other studies indicate that perceived freedom of choice among dependents, when compared to no choice and some choice, is associated to higher levels of satisfaction [30], particularly regarding satisfaction with health care provision [31, 32].

Despite this, little is known about the level of alignment (or match-mismatch) between care preferences and the care provision people receive, particularly in studies involving older dependent samples. Our study aims to address this gap by providing new evidence using representative data from dependent people aged 65 and over in an urban context in Southern Europe (Barcelona, Spain). Specifically, we seek answers to three research questions: (1) To what extent do care preferences of dependent older adults match their current care arrangements? (2) What characteristics are associated with a greater probability of alignment between preferences and received care? (3) To what extent does care match-mismatch influence dependents' well-being and satisfaction with their care arrangements? We hypothesize that economically vulnerable individuals or those living in households with fewer members are more likely to experience a mismatch between their care preferences and current care arrangements. Evidence suggests that older low-income dependent people face certain disadvantages in accessing formal home care, resulting in unmet care needs [33, 34]. Additionally, those with smaller family networks and fewer ties are less likely to receive family care support [4]. According to the limited literature that explores the association between care match/mismatch and mental health or well-being [20], we expect that older dependents experiencing a care mismatch are more likely to report lower levels of well-being and satisfaction with their care arrangements. The aim of this study is to provide new evidence in this respect by disclosing how older dependents' care preferences match with their care arrangements, whether this match/mismatch is positively or negatively associated to well-being and care satisfaction.

Methodology

Data

We used data from the *2023 Survey of Older People with Functional Dependency* in Barcelona, Spain. This survey builds on a representative sample of individuals aged 65 and above, living with a grade of dependency within an urban setting. Our sample comprised 1,600 participants with a dependency residing in households (non-institutionalized). The information was registered using CAPI data collection method (Computer-Assisted Personal Interviewer). In some cases, particularly among people with high levels of dependency, participants needed the support from their caregivers, largely family members, to complete the questionnaire. 55.8 per cent of dependents responded independently, 12.2 per cent required some assistance, and 32 per cent had caregivers respond on their behalf. After accounting for the missing data for some of the variables in our analysis (96 cases), and focusing only on self-respondents (68 per cent of the initial sample), our final sample size included 992 individuals.

Variables: Care provision, care preferences, and match

In our study we define three types of current care provision, namely "informal care" provided by family members (without including neighbours nor friends under this category), "public formal care" (home care services), and "private formal care" (home paid care services). The type

of care received by dependent individuals was captured by a multiple-choice question regarding who assists them with daily activities: "Who helps you during the week or sporadically to carry out your daily activities?", with nine possible answer categories: (a) a family member; (b) public social services; (c) public health service; (d) a third person paid with other resources different from the Dependency Assistance (formal contract); (e) a caregiver under an informal care agreement (no formal contract); (f) a caregiver service provided by a private health service corporation or social services company; (g) volunteer work from social entities; (h) neighbours (unpaid); (i) others (open answer). Since dependents may receive care from various sources simultaneously, our analysis incorporates three dichotomous variables for each type of care provision —Family (a), Public services (b + c) and Paid care (d + e + f); g and h are excluded due to low number of responses (less than 2%) —.

Preferences for care options were determined by asking respondents about their ideal support: "If you could choose, what kind of support, attention and care would you like to receive? It could be a combination of different types of care". This is a multi-response question with three possible options available to elucidate individual preferences: Family care and attention; Contracted personnel; or Public Home Care Services.

The match between care preferences and current care provision was defined by the exact alignment of caregiving types. For example, if a person received care from "family members" and "public services", but he/she only indicated a preference for "family caregivers", this would be considered as a mismatch. According to this, we created a dichotomous variable labelled as "match" indicating whether there was a match between current care provision and care preferences (1 = match and 0 = mismatch). Those individuals who answered they would prefer to live in a nursing home rather than at their own homes (question formulated as "If you could choose, where would you like to live?") were also added to the category 0 (mismatch). Only 3 per cent of respondents answered they preferred an option different from staying at home.

Variables: Older dependent and household characteristics

According to Andersen's Behavioural Model, we included a number of individual characteristics as predisposing factors of care preferences: *sex* ("women" as the reference category for our analysis); *age* (three categories: "65–75" as the reference category, "76–85" and "86 and over"); and *religiosity* (based on the survey question "to what extent is religion important in your life?" we created a dichotomous variable, being 1="very important or quite important" and 0="Not very important or not important at all"). As enabling factors, we included: *household size* ("living alone" as the reference category, with "two" people and "three or +"), and *household income* articulated as quartiles, with the "first quartile" (lowest income) as the reference category; a "no info" category was added to maintain sample size). We also included a variable accounting for the *neighbourhood socioeconomic level (NSL)* with three categories (the neighbourhood labelled as "low" socioeconomic level was taken as the reference category, "medium" and "high" socioeconomic levels). These three NSL were assigned to individuals according to their place of residence and using the neighbourhoods' annual median equivalised income levels (low = below €15,000, medium-income=€14,500 to €19,000, and high-income=€19,001 to €31,000). The NSL was a variable included in the stratification sampling process used in the survey. Finally, as need factors our model included two variables: *Grade of dependency* (accounting for the three levels of dependency severity established by the Spanish 39/2006 Law; we took "grade I"=moderate dependency, as the reference category). Dependents with grade I require assistance with basic activities at least once daily. Dependents with grade II need help two or three times daily but do not require constant caregiver presence or extensive aid to preserve autonomy. Grade III dependents need continuous caregiver presence or extensive assistance to achieve autonomy due to a high level or total loss of mental or physical autonomy. The second need factor variable included in the model was *disability* (a dichotomous variable, taking "yes" as the reference category when the dependent has a documented disability).

Variables: Satisfaction with care provision and well-being

To appraise the association between match/mismatch and relevant outcomes on individuals, we selected three indicators. The first is *satisfaction with care provision*, generated from the survey question "Do you consider that the care support you are receiving satisfies your needs?" (Dichotomous variable: Yes/No). Two additional subjective well-being indicators were included. The first is the *WHO-5 well-being index*, which consists of five positively worded items on mental health that are rated on 6-point Likert scale, ranging from 0 ("at no the time") to 5 ("all of the time"). The raw scores are transformed to a score from 0 to 100, where 0 is low level of well-being and 100 high level [35, 36]. The second indicator of wellbeing is the *UCLA-3 loneliness* index which is measured by the following 3-items: "how often do you feel that you are short of company?", "How often do you feel excluded?" and "How often do you feel isolated from others?". The sum of the three Likert-type items, each with three possible responses (1 rarely, 2 sometimes, 3 often) provides a score ranging from 3 to 9. We later transformed that into a dichotomous variable so older dependents adults with 6 to 9 points were considered as feeling lonely [37].

Analysis

Our analysis involved bivariate and logistic regressions models to explore the associations between the characteristics of dependent individuals, their preferences for care arrangements, and the match between care preferences and current care provision. Additionally, multivariate regression models (linear and logistic) were used to examine the associations between the preference-current provision match and indicators of satisfaction with care and well-being. All analyses were conducted using SPSS, version 23.

Results

Table 1 shows the descriptive characteristics of the sample and their preferences for types of care. Women constitute the majority of the sample, representing72.4 per cent compared to 27.6 per cent men. The average age of respondents is 84.4 years, with 52.4 per cent being over 85 years old. Family care is the most frequently used care provision at 67.3 per cent, followed by public services (49.4 per cent) and paid care (37.2 per cent). The total percentages in the table exceed 100% since each respondent could receive/prefer more than one type of care. Preferences for care and care provision received are

Table 1 Characteristics of older dependent adults (65 years and over) and their association with types of care preferences

			Types of care preferences					
	Total		Family		Public Service		Paid	
	%	(*N*)	%	(*N*)	%	(*N*)	%	(*N*)
Total	100	(992)	62.4	(619)	32.5	(322)	22.6	(224)
Sex								
Women	72.4	(718)	59.9	(430)	34.3	(246)	24.7	(177)
Men	27.6	(274)	69.0	(189)	27.7	(76)	17.2	(47)
Age								
65–75	16.2	(161)	61.5	(99)	30.4	(49)	19.9	(32)
76–85	31.4	(311)	62.4	(194)	35.4	(110)	14.8	(46)
>85	52.4	(520)	62.7	(326)	31.3	(163)	28.1	(146)
Household size								
1	26.8	(266)	41.0	(109)	44.4	(118)	21.2	(154)
2	50.3	(499)	66.7	(333)	29.1	(145)	20.2	(101)
3 and +	22.9	(227)	78.0	(177)	26.0	(59)	23.3	(53)
Grade of dependency								
Grade I	61.1	(606)	57.4	(348)	36.1	(219)	22.1	(134)
Grade II	32.0	(317)	68.8	(218)	26.5	(84)	21.5	(68)
Grade III	7.0	(69)	76.8	(53)	27.5	(19)	31.9	(22)
Disability								
Yes	69.5	(689)	61.1	(421)	34.4	(237)	21.8	(150)
No	30.5	(303)	65.3	(198)	28.1	(85)	24.4	(74)
Religious								
Yes	61.5	(610)	64.9	(396)	31.1	(190)	24.4	(149)
No	38.5	(382)	58.4	(223)	34.6	(132)	19.6	(75)
Household income quartiles								
Quartile 1	25.8	(256)	48.4	(124)	43.4	(111)	23.4	(60)
Quartile 2	20.2	(200)	57.5	(115)	34.0	(68)	20.0	(40)
Quartile 3	19.7	(195)	72.3	(141)	25.1	(49)	14.4	(28)
Quartile 4	18.1	(180)	80.0	(144)	27.8	(50)	18.9	(34)
No info	16.2	(161)	59.0	(95)	27.3	(44)	38.5	(62)
Neighbourhood socioeconomic level								
Low	41.7	(649)	64.5	(267)	29.0	(120)	18.4	(76)
Medium	42.5	(653)	61.8	(261)	35.8	(151)	25.8	(109)
High	15.7	(298)	58.3	(91)	32.7	(51)	25.0	(39)
Current Caregiving provision								
Family	67.3	(668)	72.2	(482)	31.1	(208)	20.8	(139)
Public service	49.4	(490)	57.1	(280)	44.9	(220)	23.9	(117)
Paid	37.2	(369)	59.3	(219)	33.9	(125)	40.7	(150)

Note: Percentages of "Family" "Public service" and "Paid" care sum more than 100 per cent due dependents could receive/prefer more than one type of care at the same time

quite alike in the case of family caregiving (62.4 per cent preferring family care). However, preferences for public service and paid caregiving show lower percentages (32.5 per cent and 22.6 per cent respectively) than the care actually provided. Data suggests there is some correlation between the current type of care provision and preferences. Some research indicates that this may be due to social desirability bias, with the care arrangement in place being perceived as the best option for dependents [4]. Although some bias may be occurring, it does not seem to be high, as the percentage of match does not reach 50 per cent in some cases (neither in public service nor in paid caregiving).

Care preferences among older dependent adults vary according to characteristics, such as sex, household size, degree of dependency, and household income, but not according to age. Preference for family caregiving is more frequent among men than women, whereas women show a higher preference for public and paid caregiving. Additionally, as the number of individuals in the household increases, the preference for family caregiving becomes more intense, while the preference for public care services decreases. Among individuals with higher levels of dependency, there is a higher proportion that prefer family and paid caregiving. The presence of persons with disability in the household does not seem to be associated with individuals' care preferences. Finally, older dependents living in wealthier households were more likely to prefer family care and less likely to prefer public and paid care services. As regards the importance of NSL, Table 1 shows the lower the NSL the higher the preference for family care, whereas public and paid care increase as one moves up in the NSL scale.

Table 2 presents the logistic regression results for each type of care preference. The odds ratios (OR) in the table show the likelihood of preferring each type of care being a man compared with being a woman (reference category), being >85 compared to being 65–75 years old, and so on. No significant differences in care preferences are found with respect to sex and age (which were identified as *predisposing factors* according to the ABM). Significant differences in care preferences are observed based on household characteristics (*enabling factors*), particularly regarding preferences for family care and public

Table 2 Preferences for types of care among older dependent adults (65 years and over). Logistic regressions

	Family		Public Service		Paid	
	OR	**95% CI**	**OR**	**95% CI**	**OR**	**95% CI**
Sex (ref. Woman)						
Man	1.25	0.90–1.74	0.79	0.57–1.10	0.76	0.52–1.11
Age (ref. 65–75)						
76–85	1.24	0.81–1.90	1.22	0.79–1.89	0.64†	0.38–1.08
>85	1.35	0.89–2.04	1.03	0.68–1.56	1.28	0.80–2.05
Household size (ref. one)						
Two	2.19***	1.55–3.11	0.61**	0.43–0.87	0.83	0.56–1.24
Three and +	3.54***	2.28–5.50	0.57*	0.37–0.88	0.87	0.54–1.40
Grade of dependency (ref. Grade I)						
Grade II	1.38*	1.01–1.87	0.72*	0.53–0.99	1.03	0.73–1.46
Grade III	1.96*	1.06–3.63	0.84	0.47–1.50	1.76†	0.99–3.14
Disability (ref. No)						
Yes	0.64**	0.46–0.87	1.57**	1.14–2.16	1.12	0.79–1.58
Religious (ref. No)						
Yes	1.64*	1.09–1.96	0.81	0.61–1.09	1.23	0.88–1.72
Household income quartiles (ref. 1rst)						
Quartile 2	1.19	0.80–1.78	0.72	0.48–1.07	0.85	0.53–1.35
Quartile 3	2.00**	1.29–3.10	0.53**	0.34–0.82	0.62†	0.36–1.05
Quartile 4	3.09***	1.89–5.09	0.60*	0.37–0.95	0.88	0.51–1.50
No info	1.15	0.75–1.71	0.55**	0.36–0.86	1.99**	1.26–3.13
Neighbourhood socioeconomic level (ref. Low)						
Medium	0.83	0.61–1.13	1.43*	1.06–1.94	1.64**	1.16–2.32
High	0.59*	0.39–0.89	1.34	0.88–2.02	1.47	0.93–2.32
Constant	0.50*		0.74		0.20***	
N	992		992		992	
Pseudo R^2	0.17		0.08		0.09	
Log likelihood	1,181.83		1,193.67		996.73	

Note: CI = Confidence Interval

Significance levels: †$p < 0.1$; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

services. Older dependents living with others (household sizes "Two" and "Three and +") are more likely to prefer family care (OR = 2.19; $p < 0.001$; OR = 3.54; $p < 0.001$, respectively) than those living alone. This may be attributed to an adjustment in preferences influenced by household arrangements. Specifically, individuals living alone (reference category) show a higher preference for public service support compared to those living with another person (OR = 0.61; $p < 0.01$) or with two or more people (OR = 0.57; $p < 0.05$). Household size does not significantly influence the preference for paid caregiving. The grade of dependency and the disability variables (*need factors*) exhibit different types of associations with preferences for family care and public services. In this respect, grade II and III dependents are more likely to prefer family caregiving compared to grade I dependents (OR = 1.38; $p < 0.05$ and OR = 1.96; $p < 0.05$, respectively), and having grade II of dependency diminishes the preference for public services (OR = 0.72; $p < 0.05$) when compared to grade I. Having any disability reduces the probability of preferring family caregiving (OR = 0.64; $p < 0.01$) and increases the likelihood of preferring public care services (OR = 1.57; $p < 0.01$). Religious individuals are more likely to prefer family care (OR = 1.64; $p < 0.05$). Higher household income is associated with a greater probability of preferring family caregiving (Q3 income OR = 2.00; $p < 0.01$; Q4 income OR = 3.09; $p < 0.001$), and a lower likelihood of preferring public services (Q3 income OR = 0.53; $p < 0.01$; Q4 income OR = 0.60; $p < 0.005$). Dependents living in neighbourhoods with a high socioeconomic level are less likely to prefer family care (OR = 0.59; $p < 0.005$) than those other dependents living in low NSL. Finally, those older dependents residing in medium NSL are more likely to prefer public services and paid caregiving (OR = 1.43; $p < 0.05$ and OR = 1.64; $p < 0.01$, respectively).

Table 3 Logistic regressions predicting the probability of match according to characteristics of older dependent adults (65 years and over)

	OR	95% CI
Sex (ref. Woman)		
Man	1.41*	1.03–1.94
Age (ref. 65–75)		
76–85	0.76	0.51–1.15
>85	0.64*	0.43–0.96
Household size (ref. one)		
Two	1.09	0.75–1.61
Three and +	1.64*	1.06–2.55
Grade of dependency (ref. Grade I)		
Grade II	0.96	0.70–1.31
Grade III	1.01	0.58–1.77
Disability (ref. No)		
Yes	0.96	0.70–1.33
Religious (ref. No)		
Yes	0.90	0.67–1.20
Household income quartiles (ref. 1rst)		
Quartile 2	0.60*	0.39–0.93
Quartile 3	0.70	0.45–1.09
Quartile 4	1.11	0.71–1.75
No info	0.61*	0.38–0.98
Neighbourhood socioeconomic level (ref. Low)		
Medium	0.87	0.64–1.17
High	0.70	0.47–1.07
Constant	0.67	
N	992	
Pseudo R^2	0.06	
Log likelihood	1,164.78	

Note: CI = Confidence Interval

Significance levels: †$p < 0.1$; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3 shows the results from a logistic regression model analysing how dependents' characteristics are associated to preferences matching, i.e., the alignment of their preferences of care with the type of care they receive. The proportion of dependent persons with a match is 29.4 per cent. Men are more likely than women to have their preferences aligned with their current care arrangement (OR = 1.41; $p < 0.05$). Dependents who are 85 or over were less likely to match their preferences for care with the care they receive when compared to younger age groups (OR = 0.64; $p < 0.05$). Further, living with more than one person increases the likelihood of a match (OR = 1.64; $p < 0.05$). We found no significant differences based on the grade of dependency, disability, religion, or NSL. However, individuals in a second-quartile household income are less likely to have a match (OR = 0.60; $p < 0.05$) compared to those in the lowest income level.

We conducted a series of regression models (Table S1, included as supplementary material) to examine the associations between matching and the characteristics of older dependents for each type of care (family, public and paid). Results indicate that individuals aged 85 and older have a lower probability of a match in the case of public care services (OR = 0.65; $p < 0.01$), as do those with a high dependency level (above grade I). Conversely, older dependents not living alone have an increased probability of a match. No significant differences were found in family caregiving; however, men have a higher probability of a match than women in paid care (OR = 1.70; $p < 0.001$).

Table 4 examines how a match/mismatch is associated to both satisfaction with care and well-being indicators. Results show that a positive alignment of care preferences and current care arrangements is only statistically associated with satisfaction with current care support. Dependents whose care preferences align with their current care arrangements are less likely to feel unsatisfied with their current care support (OR = 0.55; $p < 0.01$). No significant association was found between

Table 4 Relationship between matching and quality of life indicators (subjective well-being, loneliness, satisfaction with current care)

	Subjective Well-Being (WHO-5)		Loneliness (UCLA-3)		No satisfaction with current care	
	B	95% CI	OR	95% CI	OR	95% CI
Match between care preferences and care arrangements (ref. No match)						
Match	-0.38	-4.36-3.58	0.83	0.54–1.27	0.55**	0.38–0.79
N	992		992		992	
R^2	0.05					
Pseudo R^2			0.06		0.06	
Log likelihood			744.3		977.61	

Note: CI = Confidence Interval. B = Estimates no standardized for linear regression. OR = Odds Ratio for logistic regression. All models are controlled by: sex; age; household size; grade of dependency; disability; religion; household income quartiles; and neighbourhood socioeconomic level

Significance levels: †$p < 0.1$; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

match/mismatch and subjective well-being or loneliness. Regarding the association of each type of match with quality-of-life indicators (see Table S2 in supplementary material section), we found that having a match in public care services reduces the likelihood of dissatisfaction with received care (OR = 0.68; $p < 0.01$). In contrast, no significant differences were found for the other types of matches.

Discussion

Older dependent adults that participated in the *2023 Survey of Older People with Functional Dependency* in Barcelona, Spain, report a clear preference for remaining in their homes and receive care primarily from their family members. These findings are consistent with research conducted in other settings [6]. Moreover, our study reveals that other care options are also considered preferable, especially public services above paid private care. This may be due not only to differences in service quality but also to an adjustment of expectations to personal economic constraints. In this respect, previous research indicates that dependent individuals with lower income levels are less likely to use paid care services and more likely to use public services [13, 38].

While economic factors play a role in shaping care preferences, our analysis shows they are not the only explanatory factors. Overall, we have observed that 70.6 per cent of the surveyed population experience a mismatch between their care preferences and the type of care they receive. In this regard, it is relevant to notice that women are less likely to align their preferences with the care they receive, further aggravating the gender gap in care. In our context, women constitute the majority of caregivers, both informally and formally. Our study suggests that when these women become dependent, they are the least likely to have their care preferences fulfilled. One of the main explanations for this phenomenon may be found in the association between the type of care received and the household composition. While family caregiving is the most preferred option, men are often cared for by their partners, mostly their wives. Conversely, women are less likely to receive care from a household member, primarily because they are more often widowed due to their higher life expectancy and age difference at marriage. Additionally, from a gender perspective, some studies show that the gender of the family caregiver influences the probability of using other services. Male caregivers favour a more independent approach to care, accessing fewer formal services than their female counterparts [39, 40].

Age is another variable associated to mismatch. Our findings point to dependents over 85 years of age having a greater probability of reporting a mismatch between actual care received and their preferences for care. It would be reasonable to think that as people age, their health conditions worsen, especially if they are dependent. This deterioration makes adequate management with the same resources more difficult. People in this situation may realize that the increase in their care needs requires adjustments in the types of care received (e.g., time dedicated, limits of family commitment/burden, professional care, home modifications). This situation may lead to a greater perception of mismatch between the care received and the care perceived as necessary [41]. The anticipation of illness progression and a better understanding of what lies ahead in their lives may reinforce the previous statement. Finally, other factors associated with aging may lead to changes in preferences, resulting in a mismatch situation. As people age, they are more likely to become widowed, and losing a spouse can profoundly affect their preferences for care.

In general, the Andersen's Behavioural Model is an appropriate framework for identifying the factors that influence people's preferences and their current care alignment. However, in some cases, it may not be considered entirely conclusive. Our results indicate that *enabling factors* and *need factors* have more significant effects than *predisposing factors*, particularly in determining the preference for family and public care services. However, predisposing factors, such as age and sex, have a significant relevance in explaining the probability of a preference match. Additionally, enabling factors, such household income and household size, also influence

the alignment of care preferences with the current care arrangements. From the perspective of equality, access to care should be granted primarily according to need and not to other factors such as income or availability of resources (enabling factors).

Need factors are the most direct reasons for using one or other type of care. In our study, we use the grade of dependency and disability as need factors. We do not find any significant effect of these variables on the likelihood of matching. However, both variables have a significant effect on family care preference, albeit in different directions. Greater levels of dependency increase the likelihood of preferring family care, while older dependents with a disability are less likely to prefer it. Conversely, in the case of public care preferences, both variables exhibit the opposite trend.

Enabling factors, such as income and available resources, are also relevant in explaining preferences for public and family care services. We anticipated that these factors would similarly influence preferences for paid care services. However, our results do not support this hypothesis.

The alignment of preferences with the type of care received may be influenced by factors beyond the older dependents' characteristics. External elements may also play a significant role. For instance, the availability of public benefits for paid care may be insufficient or inadequate [42], and the allocation of public care services may be limited in duration, failing to meet the actual needs of older dependents [13]. These factors may render certain types of care less attractive and shape older dependents' preferences, potentially preventing them from accessing the care services they desire.

In terms of how a misalignment between care preferences and received care may be associated to satisfaction and wellbeing, this study contributes to the limited evidence suggesting that such misalignment is not directly connected to people's well-being. Similarly, Kasper et al. [4] found no significant association between matching care preferences and subjective well-being, satisfaction with one's living situation, or participation restrictions. However, we observe such a mismatch is associated with satisfaction with the care received. Care satisfaction could be considered as a proxy for subjective quality of life or well-being. According to Kahana et al. [20], residential satisfaction is another indicator linked to well-being showing a significant relationship with older person-environment match. Overall, empirical results on the effect of match/mismatch care preferences on quality of life or well-being is very scarce and not entirely consistent. We encourage further research to explore the effect of mismatch on various quality of life indicators, and to include other profiles of dependent individuals in the sample, for example, those residing in nursing homes.

Despite its contributions, this study has limitations. It is based on a Southern European urban context, and it would be valuable to compare these results and conclusions with studies conducted in other European contexts, as well as in rural environments. A second limitation arises from the loss of the initial representative sample, as our analysis excluded those older dependents who lacked the capacity to respond to the questionnaire by themselves. This may potentially affect the representativeness of the sample, especially by reducing the number of individuals with higher grades of dependence. However, this limitation can be considered a small price to pay for obtaining the opinions of dependent individuals and analysing their current care preferences. Finally, since our data were collected at one point in time, no temporal changes in participant's preferences for care could be measured. Research has shown that changes in contextual factors or experience may influence preferences over time [43]. Another limitation of this survey is the lack of additional well-being indicators. It would be beneficial to contrast the association between match/mismatch and the well-being of older dependents, similar to the approach used by Kasper et al. [4], which utilized subjective wellbeing and other satisfaction indicators. Despite these limitations, it should be noted that only few studies provide high-quality evidence on this research field. Even fewer number analyse the current care preferences of dependent individuals using a questionnaire specifically designed for this purpose.

Conclusions

In designing long-term care systems, understanding user preferences is essential for tailoring services to better meet the needs and demands of users. Preferences play a significant role in people's lives and, although they may change over time, a misalignment between care expectations and reality can lead to dissatisfaction. While expectations and preferences are continuously adjusted according to individual circumstances, some elements remain constant.

Aging in place (home care) seems to be the preferred option among older dependents, which highlights the importance of social policies that support this choice. However, as family support for dependent individuals becomes less available and given the significant burden this type of care may place on family caregivers (particularly on women), there is an increasing need for flexible and personalized strategies. Such strategies would allow for a better alignment of care preferences throughout the individual's lifetime and evolving needs.

Preferences indicate both the direction of current and future needs. Understanding older people's preferences in the field of long-term care is increasingly seen as important for assessing and improving the quality of care. The public policy response must consider both the preferences of

dependent people and provide information about the different options that may be available to them.

Our findings also indicate that aligning individuals' care preferences with the care they receive is associated with a higher satisfaction with the care received. According to our results, the presence of absence of a match in public care services is the primary factor influencing satisfaction with current care. Public services should be tailored to meet the needs of older dependents to enhance their wellbeing. In resource-limited systems, it is crucial to improve our understanding of the aspects of long-term care that are most valuable to people. Public care systems should incorporate participatory mechanisms that enable both dependents and care givers to actively contribute with their opinions, perspectives, and preferences in the design of care strategies.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12877-025-05749-4.

Supplementary Material 1

Author contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Julià A., Gallo, P. and Escapa S. The first draft of the manuscript was written by Julià A., Marga Marí-Klose and Gallo, P. All authors commented on previous versions of the manuscript. All authors read, revised and approved the final manuscript.

Funding

This study was funded by the "3a edició de les Subvencions per a Recerca i Innovació 2022", Barcelona City Council and "La Caixa" Foundation. Project: 22S07300-001 "DEPCURA-BCN: The situation of functionally dependent older individuals and caregivers in Barcelona".

Data availability

The dataset generated by this research is available in the data repository of Barcelona City Council: https://ajuntament.barcelona.cat/en/administrative-information/other-administrative-information/public-opinion-poll-register.

Declarations

Ethics approval and consent to participate

Our research was conducted in accordance with the principles outlined in the Declaration of Helsinki. All participants (or legal guardians) gave their informed consent to participate in the study. The Bioethics Committee of the University of Barcelona (CBUB) gave a favourable verdict after evaluate the methodological, ethical and legal aspects of the project. Institutional Review Board: IRB00003099.

Competing interests

The authors declare no competing interests.

Conflict of interest

None reported.

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Received: 14 May 2024 / Accepted: 3 February 2025
Published online: 21 February 2025

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