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A descriptive study of first time outpatient public psychiatric care after 65 years

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Abstract

Background Mental health in the older adults represents a public health issue, especially depression and suicide, and even more in the Brittany French region. Community Mental Health Centers (CMHC) are the front-line French psychiatric healthcare organizations, but the number, characteristics and trajectories of the older adults consulting there for the first time are unknown.

Method An exhaustive cross-sectional study from medical records about first-time consultants in any CMHC of the Guillaume Régnier Hospital Center in 2019, and quantifying and describing the 65 and over ones according to socio-demographic, clinical, geographic and trajectory criteria.

Results This population represents 9.7% of all first consulting in CMHCs. We can note that 70.5% are female, 46.8% are living alone and 31.2% are widowed. These 3 rates are higher than in the general population. The main diagnosis we found is mood disorder (35.1%). Organic mental disorders are scarce (8.2%). Most people are referred by a general practitioner (53.4%) or a specialist/hospital center (23.7%). The main referral at the end is to CMHC care (73.6%). Only 20.0% had a referral to non-psychiatric health professionals (GP, coordination support teams, geriatrics, other professionals). Significant differences in the referral at the end exist between 65 and 74, who are more referred to CMHC professionals, and 75 and over, who are more frequently referred to non-psychiatric health professionals. Significant discrepancies about who referred are found according to community area-type.

Conclusion These results align with the literature about known health-related characteristics and the importance of depression in the older people. They question the link with non-psychiatric professionals, and the need to structure a homogeneous care organization in psychiatric care for the older adults with trained professionals, especially for the 75 and over.

Keywords Cross-sectional study, Older adults, Psychiatric trouble, First consulting, CMHC, France

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Background

Since the late 90s, the World Health Organization (WHO) stresses the need for dedicated care for old-age psychiatry (defined as 65 years of age and over) [1–3]. Likewise, the WHO's report on aging and health highlights the positive economic, social and human impact of investing in health (including mental health) of older people [4].

Indeed, all over the western countries, mental health disorders in home-living older adults are both frequent and disabling, even if the prevalence is difficult to estimate because of difference in criteria used in epidemiological studies [1, 5–8]. The prevalence of any mental disorder in older people in the last year varies from 5.8 to 35.2%, the prevalence of affective disorder from 3.2 to 13.7%, and the prevalence of anxiety disorder from 3.6 to 17.2% [6, 8]. In France, the ESPRIT survey showed, in community living people aged 65 and over, a prevalence of anxiety disorders of 14.2%, major depressive episodes of 3.1%, suicidal ideation of 9.8%, and at least one psychiatric disorder of 17% [9]. In addition, the suicide rate is higher in the older people and increases with age, and the lethality is higher than the younger ones [10, 11]. In fact, 28% of total suicides in France during year 2011 occurred among older adults [1]. Moreover, 90% of the suicides of the older people are related to a psychiatric disorder [12].

In Brittany, a French western region where the rate of older people is higher than the average rate in France and is still increasing (22.9% 65 and over compared to 20.7% [13]) the problem of mental health in the older adults seems to be even more important. First, it is where suicide mortality is the greatest (+65% higher compared to the national rate: 24,8 versus 15,1 per 100000 inhabitants standardized rate), including older adults [14]. Second, the rate of people aged 65 and over treated for a psychiatric pathology in 2015 in Brittany is significantly higher than the French average (between 3158.8 and 4867,6 versus 2650,9 per 100000 consumers for neurotic or mood disorders, and between 920,5 and 1610,6 versus 768,6 for psychotic disorders [1]).

The European Observatory of Health Systems and Policies explains that "The French mental health system has historically been organized around public and private non-profit hospitals, which have had the main responsibility for providing mental health care (including outpatient care) to the population in administratively defined catchment areas", with "…requirement for all hospitals providing psychiatric care to be part of a formal territorial network involving all mental health care providers at the local level" [15]. In fact, public psychiatric care is geographically organized in psychiatric sectors, and not according to pathology or age. Each psychiatric sector is independent, includes hospital units and outpatient healthcare organizations, and covers a 70 000 inhabitants territory (but often more) [16]. The Community Mental Health Centers (CMHC) are the backbones of this psychiatric sector outpatient care. This is of importance since outpatient care is the main mode of French psychiatric care (national outpatient treatment rate of 89%, and 75% in exclusive outpatient setting [17]). Therefore, the CMHC is the front door of public psychiatric care to all adults from 16 year's old and including older adults [16, 18]. In this context, dedicated Old Age Psychiatry (OAP) healthcare organizations with specific training are still sparse in France, while the older population is constantly increasing [1, 18, 19]. Importantly CMHC nurses are the first-line healthcare professionals who welcome, gather the clinical record, perform the first clinical description, assess the urgency and start to organize the care plan [16] in partnership with psychiatrists and other healthcare professional such as social workers.

While it is reasonable to think that CMHC nurses adequately assess psychiatric disorders in young adults, there are some specificities about older adults suffering from late-onset psychiatric disorders that requires to be assessed for a first-time consultation. For example, a proper first consultation should have a broad assessment of the person (dis)ability, a thorough investigation of the physical diseases and their corresponding medications, cognitive screening (which frequently co-occurs with depression and anxiety), pain (which is a risk factor for depression and suicidal thoughts and conducts), falls history (which will contra-indicates some psychotropic drugs) and visual and auditory status (which are risk factors for depression) and the need to liaise with the general practitioner (to avoid polymedication). This holistic care approach is a fundamental aspect in OAP in order to meet the patient's needs [20]. Nevertheless, while the international recommendations suggest trained old-age psychiatry health care professionals, it is actually very rarely the case in France [3, 21–23]. And finally, the lack of coordination, limited integration of Psychiatry in general healthcare system, and fragmentations in the whole French healthcare system including local and clinical level can impact this holistic care and care trajectories [15, 24].

To comprehensively understand the care-offer for older adults consulting for the first time in CMHC and streamline the care trajectories to a better coordination between the CMHC and other health professionals, we need a clear picture of the proportion of old-age first-time consultant compared to the younger first-time consultant population. Nevertheless, we were not aware of previous studies describing older adults receiving care in CMHC as first-time consultant and assessing their prevalence.

By consequence, the first objective of our research is to quantify the population of first CMHC consultants aged 65 or over in the territory during the year 2019 as part

of the prevalence of all first CMHC consultants. The secondary objectives consist in describing this population according to socio-demographic, clinical and geographic criteria; and to describe the care trajectories (i.e., before/after the health care professional's assessment).

Method

Population

In order to quantify the CMHC first consultants aged 65 or over and describing this population and the care trajectories, we made a single-centered cross-sectional study based on retrospective data from patient medical records within the scope of the Centre Hospitalier Guillaume Régnier (CHGR) during year 2019 (which was the last complete year before the beginning of this study, and the last year before COVID, which has altered care access).

The lack of standardization in the patient medical records depending to the psychiatric hospitals, and the preliminary nature of this study led us to choose a single-centered design.

CMHC first consulting is defined as 1 to 3 appointments maximum with a CMHC healthcare professional for the first time (in order to assess the care needs), in an adult CMHC or equivalent (home by CMHC team or mobile OAP teams).

For the primary aim (see Flow-Chart), we included all people 16 and over who were first time consultant in an adult CMHC in 2019 (i.e., medical records created in 2019).

For the secondary aims (see Flow-Chart), we included for analysis people who were 65 and over, and by consequences, we extracted their medical records. Following the French research guidelines, a letter was sent to all the included persons 65 and over, in order to be sure they do not object to participating in the study. That is why we did not include among the 65 and over: (i) people with a wrong or unknown location and (ii) people or representative who have refused the participation in the study, (iii) people with a history of psychiatric follow-up (defined here as follow-up by a psychiatrist in the context of a chronic condition as defined by the WHO [25]) in another Hospital Center or psychiatric healthcare organization than CHGR.

Table 1 Secondary endpoints and related-criteria of the study

Characteristics	Criteria
Socio-demographical features	Age in 2019
	Gender (male; female)
	Marital status (married-concubinage-civil partnership; widowed; divorced; single)
	Residency (where they live: home; other)
	Lifestyle (in couple; alone; other)
	Activity (retirement; other)
Clinical criterion	Diagnosis or reason for care seeking according to the ICD-10 (F0; F1; F2; F3; F4; F5; F6; F7; F8; F9; other).
Geographical criterion	Community area type (urban exclusively; intermediate (mixed urban and rural areas with urban attraction); mostly rural)
Care trajectory	The person who referred (General Practitioners (GPs); medical specialists-hospital Center; people themselves-family; other professionals)
	The urgency of the request (urgent; semi-urgent; non-urgent)
	The intervention or not of a psychiatrist during the first consulting (yes; no) defined as if the healthcare professional who welcome the first consultant asked the psychiatrist opinion about the clinical situation and the referral at the end
	What was the referral at the end of the first consulting (CMHC professionals; non-psychiatric health professionals; no referral)

Measures

The primary aim is the proportion (in %) of people aged 65 and over in 2019, consulting for the first time in any CMHC in 2019, as a part of all the first-time consultants in any CMHC (16 years and over) in 2019.

The secondary aims are to describe this specific population according to the criteria shown in the following table (Table 1).

We also drive sub groups analysis according to age, sex and community-area type (those criteria were chosen because they are characteristics potentially linked to mental health problems [26–28]). Community areas type of the psychiatric sectors were defined according to the DATAR data [29].

Data collection

Global Data source was the hospital medical records of the included population. Nevertheless, in order to verify and complement data collection, we used 3 ways (automatically extracted data; administrative data; text data) to extract the data from the medical records. In fact, none of the three could give us all the data. Automatically extracted data was extracted from the medical records by the Medical Information Department (who manages the medical records in the hospital). Administrative data of the medical records (which are checked by secretaries) and text data of the medical records (writings from the healthcare professionals) were manually checked by one author (LDF).

To ensure good data quality and resolve some data contradictions in the medical records between automatically extracted data, administrative data and text data [30], we used the following algorithm:

- A data from one of the 3 data sources prevails the absence of data in the 2 other data sources.
- For sector attribution, age, and diagnosis, administrative data (checked by secretaries) prevails

a contradictive data from one of the 2 other data sources.

- For gender, marital status, residency, lifestyle, activity, the person who referred and the referral to criteria, text data (writings from the healthcare professionals) prevails a contradictive data from one of the 2 other data sources.

Statistical analysis

We performed descriptive analysis (number of subjects, percentages, means, and standard deviations) according to the previously mentioned criteria (cf. secondary endpoints tab). The percentage of "No Information" but was not considered as a variable and was not included in the statistics. We indicated the number and percentage of available data for all criteria. We decided to drive statistical test sin sub-group analysis during the analyze phase in order to assess the statistical evidence of the secondary aims results. We used the Chi2 test or the Fisher Exact Test, depending on the sample size. In most of the Fisher Exact Tests, we are able to give only the p-value, because the criteria are greater than 2. A descriptive post-hoc analysis was driven during the analyze phase, in order to better understand the lack of diagnosis. We took the situations without diagnosis and describe (percentages) if a psychiatrist intervened or not in this sub-population.

Ethical approval

The project was approved by the Rennes University Hospital Center Ethics Committee on January 21st, 2021 (Opinion n° 21.04), and informed consent was obtained from all subjects and their potential legal guardians, in accordance with the French clinical guidelines in research and with Helsinki declaration.

Results

Among the total number of first-time consultants in adults CMHC ($n=2330$), there were 226 people 65 and over (9.7%) during year 2019.

For the analysis of the secondary aims, of these 226, 181 were included and 129 were suited for descriptions (see Fig. 1. flow-chart). Of these 129 people, the mean age was 76.5 +/- 8.1 (Table 2). There were 29.5% of men and 70.5% of women. The rate of widows was 31.2%, and of people living alone 46.8%. We found that 34.9% of the

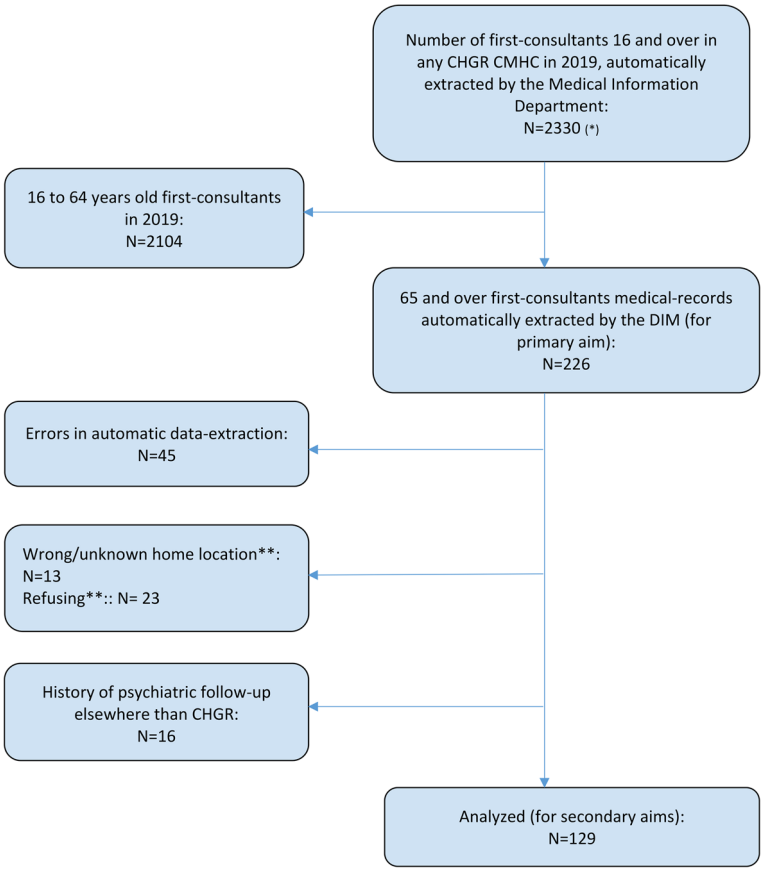

Fig. 1 Flow-chart. (*) Automatic extraction of the identities created in 2019 of people over geographically dependent on the CHGR with first contact in the CMHC, CMHC antennas, outpatient CHGR site, home, or mobile teams of psychiatry for the older people (all other locations excluded). ** According to the French Research Guidelines

Table 2 People characteristics

		Total	Age			Gender			Community-area type			
			65–74	*75 and over*	*P value*	*Male*	*Female*	*P value*	*Urban*	*Intermediate*	*Rural*	*P value*
	Number (%)	129 (100)	58 (45.0)	71 (55.0)		38 (29.5)	91 (70.5)		32 (24.8)	32 (24.8)	65 (50.4)	
Age	*Age Mean (Sd)*	76.5 (8.1)	-	-	/	75,7 (7.6)	76,9 (8.3)		79 (8.2)	74.1 (6.9)	76.6 (8.4)	
	65–74 / 75 and over (%)	45.0 / 55.0	-	-		50.0 /50.0	42.9 / 57.1	0.457 χ2: 0.55	31.2 /68.7	53.1 / 46.9	47.7 / 52.3	0.175 χ2: 3.49
Gender	*Male / female (%)*	29.5 / 70.5	32.8/ 67.2	26.8 /73.2	0.457 χ2: 0.55	-	-		34.4 /65.6	31.2/ 68.7	26.1 /73.8	0.683 χ2: 0.76
Marital status (*n* = 125 ; 96.9%)	*Married/concubinage/Civil Partnership (%)*	48.0	57.1	40.6	0.049	59.4	43.2	0.030	26.7	41.9	60.9	0.002
	Widowed (%)	31.2	19.7	40.6		13.5	38.6		33.3	38.7	26.6	
	Divorced (%)	12.0	16.1	8.7		13.5	11.4		13.3	12.9	10.9	
	Single (%)	8.8	7.1	10.1		13.5	6.8		26.7	6.5	1.6	
Residency (*n* = 84 ; 65.1%)	*Home / other (%)*	94.0 / 6.0	90.3 /9.7	96.2 / 3.8	0.270 χ2: 1.22	100 / 0	91.7 /8.3	0.315	100 /0	100 /0	89.1 /10.9	0.189
Lifestyle (*n* = 126 ; 97.7%)	*Couple/ Alone / Other (%)*	39.7 / 46.8 / 13.5	47.4 / 35.1 / 17.5	33.3 / 56.6 / 10.1	0.053 χ2: 5.88	48.6 / 40.5 / 10.8	36.0 / 49.4 / 14.6	0.419	19.4 / 71.0 / 9.7	38.7 / 58.1 / 3.2	50.0 / 29.7 / 20.3	0.0006
Job (*n* = 119 ; 92.2%)	*Retired / in job (%)*	97.7 / 2.3	-	-		-	-		-	-	-	
Diagnosis or reason for care seeking according to ICD 10 (*n* = 97; 75.2%)	*F0 (organic mental disorders) (%)*	8.2	6.5	9.8	0.823	12.5	6.2	0.624	17.4	0	7.0	0.278
	F3 (mood disorders) (%)	35.1	41.3	29.4		31.2	36.9		26.1	52.9	33.3	
	F4 (neurotic disorders) (%)	19.6	19.6	19.6		21.9	18.5		26.1	17.6	17.5	
	F6 (personalit ydisorder) (%)	4.1	4.3	3.9		3.1	4.6		4.3	5.9	3.5	
	G20 (extrapyramidal syndrom) (%)	1.0	-	2.0		3.1	-		4.3	-	-	
	R/Z (isolated symptom/complaint) (%)	32.0	28.3	35.3		28.1	33.8		21.7	23.5	38.6	
Community-area type	*Urban / Intermediate / Rural (%)*	24.8 / 24.8 / 50.4	17.2 / 29.3 / 53.5	31.0 / 21.1 / 47.9	0.175 χ2: 3.5	29.0 / 26.3 / 44.7	23.1 / 24.2 / 52.7	0.683 χ2: 0.76	-	-	-	/

Socio-demographic, clinical and geographic characteristics of people aged 65 + consulting any CHGR CMHC for the first time in 2019 and sub-group analysis according to age, gender, and community-area type (in % or sd) and p-values

medical records did not include any information about the residency. Sub-groups analysis showed that 13.5% of men were widowed, 59.4% were married, whereas 38.6% of women were widowed and 43.2% were married (Fisher Exact Test: p: 0.03). In rural community-area type (Table 2), 60.9% of people were married and 50.0% were living as a couple, and in urban community-area, 26.7% of people were single (1.6% in rural one and 6.5% in intermediate one) and 71.0% were living alone (29.7% in rural one) (Fisher Exact Test: p: 0.002 et p: 0.0006).

For diagnosis or reason for care seeking (Table 2), we found 35.1% of mood disorders (ICD10-F3), 32.0% of isolated symptom/complaint (ICD-10 R and Z), and 8.2% of organic mental disorders (F0). We found no psychotic or addiction disorder. We found no statistical difference in the sub-group analysis. The rate of lack of diagnosis in the medical records was 24.8%.

About the care trajectory (Table 3), 53.4% were referred by GP, and 23.7% from medical specialists/hospital centers. We found that 14.4% of people were coming to the CMHC spontaneously, and 11% were referred by other professionals. In 40.3% of the situations, we found no intervention of a psychiatrist. In 23.5% of the situations, the psychiatrist intervened alone. In 36.1%, both a nurse and a psychiatrist came into play. We observed that 73.6% of patients were referred to CMHC care, and 20.0% to non-psychiatric health professionals (Geriatrics, GP, coordination support teams…).

The referral at the end of the first consulting (Fisher Exact Test: p: 0.002) differed according to age. We found that 61.4% of people 75 and over versus 89.1% of 65–74 got a referral to CMHC care, 28.6% versus 9.1% to non-psychiatric health professionals and 15.7% versus 5.5% got no referral.

The person who referred showed discrepancies according to community-area type (Fisher Exact Test: p: 0.027). In urban area, 42.3% of the elderlies were referred by specialists and hospital centers, versus 10.0% in intermediate area. In intermediate areas, 73.3% of the elderlies were referred by GPs versus 42.3% in urban ones. In rural areas, elderlies came at 21.0% by themselves or their family versus 3.8% in urban area. We found no significant differences about the referral at the end according to community area-type.

Discussion

Through a comprehensive single-centered cross-sectional study, describing people aged 65 and over consulting for the first time in CMHC in 2019, we can observe that this population represents 9.7% of all CMHC first consultants. It also highlights the prevalent socio-demographic (more female gender, high rate of widowhood and loneliness) and clinical ('depressive' and 'neurotic disorders')

Table 3 Care trajectories

		Person who referred				Intervention of a psychiatrist[a]	Referral to		
		GPs	*Medical specialist/ hospital center*	*People themselves family*	*Other professionals*	*-YES (Psychiatrist alone) -NO*	*CMHC*	*Non psychiatric health professionals*	*No referral*
Total analyzed population (%)		53.4	23.7	14.4	11.0	-YES 59.7 (23.5 psychiatrist alone, so both nurse and psychiatrist 36.1) -NO 40.3	73.6	20.0	11.2
Age (%)	*65–74*	53.8	19.2	23.1	7.7	-YES 51.9 (15.4 alone) -NO 48.1	89.1	9.1	5.5
	75 and over	53.0	27.3	7.6	13.6	-YES 65.7 (29.9 alone) -NO 34.3	61.4	28.6	15.7
	P Value	0.09				0.129 (χ2: 2.3)	0.002		
Community area type (%)	*Urban*	42.3	42.3	3.8	15.4	-YES 58.6 (48.3 alone) -NO 41.4	65.5	24.1	17.2
	Intermediate	73.3	10.0	10.0	6.7	-YES 55.6 (22.2 alone) -NO 44.4	87.1	6.5	6.5
	Rural	48.4	22.6	21.0	11.3	-YES 61.9 (12.7 alone) -NO 38.1	70.8	24.6	10.8
	P Value	0.027				0.846 (χ2: 0.33)	0.147		

Person who referred (several possible), intervention of a psychiatrist, and referral to (several possible) of people aged 65 + consulting for the first time in any CMHC of the CHGR in 2019 (% of the 129 people analyzed) + sub-group analysis according to age and community area type and p-values

[a]If there was data about the intervention of a psychiatrist, we noted "yes". If a referral was given, but without indication of intervention of a psychiatrist, or if there was an indication of absence of intervention of the psychiatrist in the data-text, we noted "no". In the other cases, we noted "no information" (not cited in this tab). Without any indication of another professional intervention than the psychiatrist, we noted "psychiatrist alone"

characteristics of this population. Surprisingly, it shows a rather low rate of 'organic disorders'. It also underlines the trajectories of this population mostly referred by GP, moderated by community area type ($p=0.027$) and get a referral mostly to CMHC, moderated by age strata (65–74 and 75+, $p=0.002$).

Taking into account the entire scope of activity of the OAP (already followed-up patients, liaison and outreach consultations, nursing home, and general hospital centers), the 9.7% rate of first-consultants 65 and over holds the need for specific OAP referents in CMHCs.

We know that the population of 65 and over in the Ille-et-Vilaine district represents 22% of all adults [31]. Although we cannot directly compare these two proportions, we can question why such a substantial gap with the 9.7% found here. First, there is less mental health problems among those 65 and over than among the general population [27, 28]. Second, older adults are more akin to consult their General Practitioner (GP), particularly for anxiety or depressive disorders [32, 33]. In fact, among those 70 years-old and over, 9% of consultations with the GP concern depression or anxiety, 5.8% depression and 4.3% insomnia [34]. Moreover, we know that GPs in France rarely refer to mental health professionals (because of a lack of coordination, accessibility, too long appointment latency) and there is a high rate of GPs per citizens compared to other European countries [32, 35]. Moreover, GPs feel competent enough to treat depression and anxiety in elderlies and these are the most frequent diagnosis in the present population [32, 35]. Given that we observed that 53.4% of 65 years-old and over first time consultants are referred by GPs, a large part of elderlies with mental health issues might not be referred to CMHC. It therefore suggests that there are at least two trajectories of psychiatric care among 65 and over with mental health issues (i.e., CMHC oriented and not). Therefore, a better characterization of these two populations will improve the adaptation of trajectories, of clinical assessment and of care provided by CMHC nurses.

As for the socio-demographic characteristics, we found a higher proportion of women, widows, divorced people, single people, and people living alone, than the general population [31, 36]. These differences align with the literature and therefore support the results [9, 27, 28, 32]. Nearly 35% of observations do not have information about residency, which is known to be a key element of older people environmental assessment and advocates for the need for referral nurses trained in the specificities of OAP [19].

In nearly 25% of situations, we found no diagnosis after the initial assessment by the healthcare professional, with no possibility to understand if it is intentional or not. A post-hoc analysis was led to better understand this fact. In the situations without diagnosis, in 62,5% a psychiatrist intervened in the first consulting, in 25% there was not any intervention of a psychiatrist and in 12.5%, we found no information. Therefore, we cannot link the lack of diagnosis to the absence of intervention of a psychiatrist. On the other hand, the lack of diagnosis could be linked to a difficulty to make a diagnosis (but R and Z ICD-10 codes could be the way to solve this difficulty), but also to historical and ethical issues about diagnosis in psychiatry. However, this issue is frequently found about neurocognitive, schizophrenia or bipolar disorders but more rarely about anxiety or depressive disorders [37–39]. This lack of diagnosis is of clinical importance, because we know diagnosis might be a risk factor to suicide re-attempt [40]. This lack of diagnosis might bias the results: indeed, we found few organic mental disorders (i.e., neurodegenerative disorders) and no psychotic disorders among the older adults who first consulted CMHC. Nevertheless, mood and neurotic disorders are also known to be potential prodromal symptoms of organic mental disorders [41, 42]. That is why further longitudinal observations are needed to differentiate between psychiatric and organic disorders.

The sub-groups analyzes did not show that community area type influence mental health in our sample. This is contradictory to previous literature suggesting that urban life style degrades mental health [28, 32]. This discrepancy might come from the medium size town (as Rennes and surrounding is) and possible greater effect size among young adults than 65 years-old and over. The statistically significant differences in marital status between men (more married and single than the women) and women (more widowed) corresponds to the profile of elderlies resorting to psychotherapy [27].

In the analysis of the trajectories, most of the referral were from GPs and medical specialists. Despite this referral, once the CMHC nurse assesses patients, they were overwhelmingly referred to the CMHC professionals. This trajectory may be due to appropriate clinical reasons, but it might be also related to a persistence of the compartmentalization of psychiatry with other disciplines, in France, because of a lack of coordination and difficulties in patient referral from and to psychiatric health care organizations [43]. The high proportion of CMHC referral is statistically more frequent among the 65–74 age group, also characterized by more spontaneous mental health request. This might be due to a generational effect on reduced use of mental health care among the oldest [27, 32]. On the opposite, the trajectories of those aged 75 and over are characterized by a more frequent referral by a specialist/hospital center and a more frequent intervention of a psychiatrist (but both non-significant), and a significantly increased referral at the end to other non-psychiatric health professionals (but also more no referral at the end). Nevertheless, there are very

few multi-referrals at end (cf. Table 3). This is of importance according the greater entanglement between age, psychiatric symptoms and organic diseases [44]. This fact might suggest a lack of integrated care (i.e. psychiatric or non-psychiatric care, but not both), and by consequence a potential loss of opportunity for older adults.

Different significant pathways emerge according to the community area-type. These disparities might be due to possible sector-specific practices, but also to differences in access to care and the structuring of the care-network (uneven access to a GP or a coordination support team) [45]. Furthermore, this heterogeneity of pathways supports the public-health objective of a homogeneous OAP care offer in the territory.

In 40.3% of situations, the nurse manages the entire first consulting alone, without the intervention of a psychiatrist. This relatively high rate raises questions about how CMHC nurses carry out their assessment and how they guide the patient, but also about their assessment tools. This aspect also ties in with the question of the evaluation of the clinical differences between psychiatric disorder and prodromal neurodegenerative disorder. Future explorations on these themes are therefore legitimate. Finally, the rate of first consulting by a psychiatrist alone (23.5%) may be surprising, according to the first consulting protocol. The presence of a specialist psychiatrist for the elderlies in this hospital, who is able to receive people from all sectors by direct referral from doctors without going through the classic care-access, may explain this bias.

Very few data exist about first consulting in elderlies in similar care organization in other countries. That is why it is difficult to put these results in perspective with abroad data. In addition, neurocognitive disorders are often included in OAP in other countries, unlike in France where neurodegenerative disorders are more related to Geriatricians and Neurologists. Nevertheless, in Tunisia, people aged 60 and over represented 8.4% of the new consultants in an outpatient psychiatric consultation, with an age mean of 73, and showed more women (54.7%) than men (45.3%). Dementia (40.2%) and mood disorders (34.6%) were the more prevalent disorders, and psychiatric antecedents were found in 27.7% of them (7,1% in our study, but "psychiatric antecedent" is not defined in their study, while we used the WHO one) [25, 46].

To go further, taking into account the items we already discussed, we could question the OAP care organization in France. Indeed, adults CMHCs care have not proved their effectiveness in OAP, and might not meet the need of the older adults: that is why The WHO promotes the creation of Community Mental Health Teams for Older People (CMHTsOP) [23, 47]. In England, which is one of the most advanced country in OAP care, OAP care organization trend to be structured close to the WHO recommendation [48]. It promotes a multidisciplinary, integrated, community based care, with the use of CMHTsOP, case-management, home clinical assessment (often by community mental-health nurse) and OAP support for the generic services [49, 50]. We can note in the English OAP care organization a high rate of referral by GPs, but also a lack of coordination with primary care professionals, that we also found in our study [50]. Despite a lack of unbiased results about their effectiveness, the literature seems to show that CMHTsOP facilitates public health system [51]. Following a similar framework, several experimentations of CMHTsOP have been driven in France, with trained OAP professionals and a better link with Geriatricians. They could be pilot experimentations in order to associate the specificities of French health organization and the evidence which seems to rise in order to support the WHO recommendations [18, 52, 53]. Nevertheless, the discrepancies between 65 and 74 and 75 and over we have found in this study might advocate to focus the CMHTsOP interventions more to the 75 and over than the 65−64, which seems to have more adapted referrals to adult CMHCs.

Strengths and limitations

This study seems to be the first descriptive study about persons 65 and over consulting for the first time in any CMHC. That is why there is no possible comparison with other results on a similar population. Although it is a monocentric study, all the CMHCs of one of the most important French psychiatric hospital (i.e. CHGR) are included with a large variety of community-area types, so it strengthens the results.

The rate of 20% of automatic extraction errors in people 65 and over can legitimately be address (see Flowchart). It requires to carefully interpret the results for the primary aim. Nevertheless, the fact that the medical-records are extracted from the same hospital, in the same healthcare organizations, with the same professionals, could suggest that the rate of error in the medical-records might be close for the people 16 to 64. Moreover, following the recommendations [30], the data-extraction by a trained- professional going through all medical records and using an algorithm to confirm data (as explained above in "Data collection") allowed us to have reliable data for the secondary aims. We manually checked the history of psychiatric follow-up only for 65 and over in the medical records, because we considered the risk was higher in the elders (because of a longer life) but remains admissible for the younger ones. The context of this study (containment linked to the COVID 19 pandemic without access to computerized medical-records in the preliminary stage of the study) did not allow us to check the relevance of two criteria: the urgency of the request, which

was in fact not recorded in the medical records and we could therefore not implement during the data collection, and the professional activity (97.7% of retirees), which turned out to be of little relevance.

Conclusion

Giving us some data about a poorly known population, this study highlights the non-negligible part of OAP in CMHCs. By the same, it highlights the need to characterize the elderlies who are not referred to CMHCs but are followed by GPs, and the need for longitudinal studies in order to discriminate between neurodegenerative and depressive or neurotic disorders in the 65and over. A better linkage with primary care seems to be necessary in order to improve care trajectories, especially for the 75 and over.

Finally, this study advocates to increase the change in healthcare framework in French OAP. In fact, in the last decade, we can see the creation of OAP medical specialty in 2017, of the Advanced Practice Nurses in 2018, and of the "Support Schemes for the population and for healthcare professionals in coordinating complex care pathways" in 2019 [54–56]. These new professionals and healthcare organizations could lead to a more integrated care in OAP. But without an OAP geographically organized in 3 levels (1: trained psychiatric professionals in CMHC in coordination with primary care professionals; 2: CMHTsOP; 3: Regional Expert Centers in OAP), already recommended by Cohen and al in 2014 [19], integrated care in OAP might be hard to implement. This might lead to a loss of opportunity for older adults with psychiatric care needs, especially the 75 and over.

Abbreviations

WHO	World Health Organization
CMHC	Community Mental Health Center
CHGR	Guillaume Régnier Hospital Center
OAP	Old Age Psychiatry
ICD-10	International Classification of Diseases 10th Revision
GP	General Practitioner
CMHTsOP	Community Mental Health Teams for Older People

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Authors' contributions

LDF, GR et AR concepted and designed the study. LDF et NA made the acquisition of data. LDF and GR made the analysis and interpretation of data. LDF, GR and DS drafted the manuscript. All authors (LDF, AR, NA, DS and GR) reviewed the manuscript.

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Availability of data and materials

The datasets used and analyzed during the current study are available from the corresponding author (Luc Daucé-fleuret) on reasonable request.

Declarations

Ethics approval and consent to participate

The project was approved by the Rennes University Hospital Center Ethics Committee on January 21st, 2021 (Opinion nº 21.04), and informed consent was obtained from all subjects and their potential legal guardians in accordance with the French clinical guidelines in research and with Helsinki declaration.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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