

Survey of the Knowledge, Attitudes and Practices of Primary Care Physician's Towards Dementia Care in Israel

Rakel Berenbaum, Julian Dresner, Bracha Erlich, Shlomo Vinker, Chariklia Tziraki

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AUTHORS / YAZARLAR

Rakel Berenbaum
(Corresponding Author)

melabev1@gmail.com

MELABEV - Community
Clubs for Eldercare, Research
and Development
Department, Jerusalem, Israel
ORCID iD:
0000-0001-7946-1085

Julian Dresner
Central District Clalit Health
Services, Dept. of Family
Medicine, Rishon L'zion,
Israel; Tel Aviv University,
Department of Family
Medicine, Tel Aviv, Israel
ORCID iD:
0000-0003-4451-8760

Bracha Erlich
Hebrew University-Hadassah
Braun School of Public
Health and Community
Medicine, Israel
Gerontological Data Center,
Paul Baerwald School of
Social Work and Social
Welfare, the Hebrew
University of Jerusalem,
Israel
ORCID iD:
0000-0002-6091-7799

Shlomo Vinker
Department of Family
Medicine, Tel Aviv
University, Tel Aviv, Israel
ORCID iD:
0000-0001-9804-7103

Chariklia Tziraki
MELABEV - Community
Clubs for Eldercare, Research
and Development
Department, Jerusalem, Israel
ORCID iD:
0000-0002-2662-6023

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ABSTRACT

Aim: Primary care physicians have an important role in the early diagnosis and management of dementia as a common first point of contact for patients dealing with cognitive decline. Our aim was to explore primary care physicians knowledge, attitudes, and practices regarding care of people with dementia and their families.

Methods: A cross sectional study among primary care physicians, attending their annual conference. The self-complete questionnaire included questions measured with a five point Likert scale as well as open-ended questions. Multivariable linear regression models were used to evaluate primary care physicians confidence in their dementia diagnosis and their level of knowledge and training.

Results: Questionnaires were returned by 95 primary care physicians, a 24% response rate. The majority of primary care physicians feel it is their role to diagnose dementia (87%), unfortunately, 80% do not feel confident in making this diagnosis and 66% feel they are lacking knowledge or training to do so. They report they need more training on non-pharmacological interventions (86%), pharmacological treatments (92%), and community services (92%). Regression analysis revealed that lack of easily accessible screening tools plays an important role in confidence in dementia diagnosis.

Conclusion: Our results may help policy makers plan interventions to meet training and system needs of primary care physicians and translate the national dementia policy guidelines into practice at the local level.

Keywords: physicians, primary care, dementia, early diagnosis, adult day care centers

İsrail'deki Birinci Basamak Hekimlerinin Demans Bakımı ile İlgili Bilgi, Tutum ve Davranışlarının Değerlendirilmesi

ÖZ

Amaç: İlk temas noktası olarak birinci basamak hekimlerinin, bilişsel gerilemeyle başvuran hastalar için demansın erken tanı ve tedavisinde önemli bir rolü vardır. Amacımız, demans hastalarının ve ailelerinin bakımı ile ilgili bilgi, tutum ve davranışları araştırmaktır.

Yöntem: Her yıl düzenlenen bir konferansta bulunan birinci basamak hekimleri arasında yapılan kesitsel bir çalışmadır. Kendi kendine doldurulan anket beşli Likert ölçeği ile ölçülen soruların yanı sıra açık uçlu soruları içermektedir. Birinci basamak hekimlerinin demans tanısı koymaya yönelik güvenlerini ve bilgi ve eğitim eksikliklerini değerlendirmek için çok değişkenli doğrusal regresyon modelleri kullanıldı.

Bulgular: Anketler 95 birinci basamak hekimi tarafından cevaplandı bu da %24 yanıt oranıydı. Birinci basamak hekimlerinin çoğunluğu demans teşhisi koymanın kendi görevi olduğunu (%87), maalesef %80'i bu teşhisi koymaktan emin olmadığını ve %66'sı bu teşhisi koymak için bilgi veya eğitimden yoksun olduklarını düşünüyordu. Farmakolojik olmayan müdahaleler (%86), farmakolojik tedaviler (%92) ve toplum hizmetleri (%92) konusunda daha fazla eğitime ihtiyaç duyduklarını düşünmektedirler. Regresyon analizi, kolay erişilebilir tarama araçlarının eksikliğinin güvenli bir şekilde demans tanısı koymada önemli bir rol oynadığını ortaya koydu.

Sonuç: Sonuçlarımız, politika yapıcılarının Birinci Basamak Hekimlerinin eğitim ve sistem ihtiyaçlarını karşılamak için müdahaleler planlamasına ve ulusal demans politikası kılavuzlarını yerel düzeyde uygulamaya dönüştürmesine yardımcı olabilir.

Anahtar kelimeler: doktorlar, birinci basamak, demans, erken tanı, erişkin günlük bakım merkezleri

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Introduction

People with dementia (PwD) have a right to an early diagnosis (1-3). There is evidence that dementia is under-diagnosed in primary care, with the global prevalence rate of undiagnosed dementia cases estimated to be 61% (4,5). Delayed diagnosis results in a higher burden of suffering, and higher avoidable health-care utilization and costs (6–10). As a common first point of contact for patients dealing with cognitive decline, primary care physicians (PCP) have an important role to play in the early diagnosis and management of dementia (11,12).

In order to provide appropriate care for the aging population, over 30 countries have adopted National Strategic Plans for Dementia care (NSPD) (13,14). These strategies have been well received and reported as the single most powerful means to improve dementia care and support nationally (15). The national plans are unique to each country, but have many common components: for example, improving training and education of professionals working with PwD is a priority in the NSPDs' of 16 countries. In some countries, the introduction of a national dementia strategy has led to greater emphasis on early diagnosis (8,9,13) yet studies show challenges in the implementation of the accepted diagnostic and management guidelines (16–18).

Significant barriers remain in implementing early diagnosis at the primary care setting including: low level of dementia knowledge and skills, hesitancy in delivering bad news with "no hope", lack of resources (i.e. time and consensus quick screening tools) and country specific limitations (19–21). Studies show that PCPs lack of knowledge and relevant training on preventive measures for dementia and non-pharmacological interventions as well as services to support family caregivers (18). Even though national consensus guidelines recommend that the diagnosis and management of patients with dementia should largely be the responsibility of PCPs (22), PCPs may perceive specialists as more appropriate for making the dementia diagnoses (23).

In 2013, Israel developed and adopted its own NSPD (24–26). One of the seven objectives included

in this plan is improving professional training for dementia care. Other objectives include increasing referrals to non-medical treatment options, such as psychosocial interventions and treatment of behavioral and psychological symptoms [BPS]; and strengthening the communication and cooperation between health and social systems so that patients can be referred from one to the other according to need.

Although Israel is a relatively young country, Israel's population is rapidly aging, and its life expectancy is one of the highest in the world (27). According to projections, over the next two decades the over-65 population in Israel is expected to double, from approximately 1,017,900 (11.6%) of the Israeli population today to some 1,900,000 (14.3%) of the population in 2040 (7). In 2010, there were approximately 149,000 people with cognitive decline and dementia and this number is expected to increase to 290,000 by 2030 and 350,000 by 2035 (28–30).

In Israel most community health care is delivered by PCPs, with 30% of outpatient clinic visits being made by people aged 65+, who make on average 11.2 visits to the physician per year (compared with an overall average of only three per year for the general population) (31). There are 5,052 practicing PCPs in Israel with 2100 of them who specialized in family medicine.

Studies assessing primary care physicians' knowledge about dementia have revealed important gaps, especially in symptom recognition and epidemiological and legal issues (32,33). Our study aims to explore Israeli primary care physicians knowledge, attitudes, practices and barriers regarding care of people with dementia and their families.

Methods

For over 30 years, MELABEV, a community based NGO, has been supporting PwD and their families from diagnosis to end of life. Services include four daycare centers, homecare, and family support (34–36). In 2016, MELABEV's research department collaborated with the Department of Family Medicine (DFM), Central District, Clalit Health Services (CHS), the largest health insurance organization (HIO) in

Israel, and the Department of Rehabilitation and Geriatric Medicine of Hadassah-Hebrew University Medical Centers to develop and implement a continuing medical education (CME) workshop on dementia. The workshop was incorporated into the regular CME curriculum organized by the central region of CHS, which is monitored by the CME directorate at Ben Gurion School of Medicine. Results from that study were reported elsewhere (37). After the workshop, it became clear that there was a need to explore the knowledge, attitudes, and practices of a larger group of Israeli PCPs related to dementia care. We were also interested in learning more about any barriers to optimal care, in order to better plan the future CME workshops. The study reported here was a collaboration between MELABEV's research team and the Department of Family Medicine, Central District, CHS to meet these aims.

In order to meet the aims of the study, a self-complete, Hebrew questionnaire was constructed. The development and validation of the questionnaire was a multi stage process taking 14 months. Starting with a literature review it was designed to explore a broad range of aspects related to PCPs knowledge and attitudes towards dementia care. It was culturally adapted to the PCPs experiences in Israel (38). A preliminary pilot test was done with experts in dementia and PCPs for comprehensibility, clarity and appropriateness for our target population. Based on comments, we identified minor issues with some items and made necessary improvements. See Figure 1 for the stages of the questionnaire development and validation and see the supplementary material for the English translation of the original Hebrew questionnaire that was used for this study.

The self-reported questionnaire included a set of 51 questions. Questions were multiple choice (12 questions), yes/no (5 questions) or measured with a five point Likert scale (12 questions). It also included 16 open questions and questions requiring writing in a numerical answer (6 questions). The questionnaire was divided into 7 dimensions: The questionnaire included questions related to knowledge and attitudes; standard diagnostic tests, non-pharmacological

interventions, knowledge and use of local community based support services, interest in future training, relaying a diagnosis of dementia, and advance planning (39–43).

In addition, we collected socio-demographic and professional training information on PCPs completing the survey to explore potential confounders related to attitudes and knowledge of PCPs in relation to dementia.

Physicians are a professional group with low survey response rates in general PCPs included (44,45). We invested much effort in order to get the highest return rate as possible (46).

The questionnaire was distributed at the yearly PCPs conference attended by 400 PCPs from all the HIOs in Israel. We felt this was a good venue to meet a large group of PCPs all at once and inspire their participation in the survey.

Participation was completely voluntary and anonymous. Every PCP who returned a questionnaire received a small chocolate as a token of appreciation for their time. Returning a filled in questionnaire meant consent to participate.

Descriptive statistics (mean, percentage, SD) were applied for all items. Completion rate varied for each question, the N for each is in parenthesis. The association between personal background data, knowledge, attitudes and two outcome variables, the confidence in the diagnosis and degree of lack of knowledge or training, were examined within this study. The statistical analysis, conducted with STATA version 15, included univariate descriptions of the study variables and two separate OLS regression models were tested, one for the degree of confidence in diagnosis, and the second for the degree of lack of knowledge or training, reported by the PCPs. Ordinary Least Squares regression (OLS) is a statistical method that estimates a linear formula equation minimizing the sum of the squares of the residuals between the observed and predicted values.

Results

The self-complete questionnaires were returned by ninety-five PCPs, a 24% response rate. Table 1

presents the distributions of each of the background study variables. It shows that the PCPs age ranged from 27 to 72, and almost two thirds were women. The majority of PCPs studied medicine in Israel (77.42%). The sample varied in terms of their acquaintance with a person with dementia with 61.05% who had a family member with dementia, and 30.53% that did not know anyone personally. The minority (6.31%) knew a friend or other person with dementia.

Table 1. Background study variables: univariate description

Variables	n	%	Mean (SD)	Range
<i>Background</i>				
Age	91		43.02 (12.49)	27-72
Gender	93			
Male		38.71		
Female		61.29		
Country of Studies	93			
Israel		77.42		
Abroad		22.58		
Graduation year	90		2003 (13.25)	1970-2017
Work Experience (years)	84		12.98 (12.71)	1-47
Familiar with someone with dementia	93			
Family member		61.05		
Friend		5.26		
Other		1.05		
No one personally		30.53		

Table 2 shows the distribution of attitude and knowledge variables. Each item was measured in a 5-point Likert scale ranging from 'not at all' to 'Extremely'. Those not confident in making the diagnosis were 42.39%, and about 36.96% were neutral. Moreover, about 30.52% reported that they experienced difficulty related to lack of knowledge or training. A third of the PCPs (32.97%) reported that they do not have enough tools, and more than half had a hard time delivering the diagnosis. In spite of the challenges, the majority (71.27%) of PCPs perceived that it is their role to provide care to people with dementia. While 62.77% of the respondents noted that early diagnosis of dementia is very or extremely important, 35.11% were neutral. Regarding the importance of the Electronic Medical Record (EMR) software, the vast majority of PCPs valued the 'stop start' feature (which documents the date the patient

starts taking a medication, and the recommended date to reassess) as important (86.03%), and all of them perceived reorganizing drugs at least once a year among patients aged 65+ as crucial. Related to the effectiveness of evidence based non-pharmacological treatments, support for the primary caregiver (98.93%), environmental adaptations (96.81%) and daycare (93.62%) were the most important practices in these PCPs perspective. Outdoor activities (84.95%) and music therapy (66.3%), in comparison, were less recognized. Regarding the importance of routine examinations for patients age 65+, depression (90.22%) was the most important, followed by eye test (91.30%), hearing test (89.13%), dental examination (82.61%), and least important was routine cognitive examination, mentioned by two thirds of the PCPs (69.56%).

Table 3, the univariate description of training needs of PCPs, shows that PCPs feel they need more training in non-pharmacological interventions (86%), pharmacological treatments to prevent deterioration (82%), pharmacological treatment for behavior problems or mental problems (92%), as well as more information on community services (92%).

The first multi-variable OLS regression analysis related to confidence in diagnosis reveals that of the background variables that were measured, only gender was significantly associated, such that female PCPs reported fewer difficulties with their confidence in diagnosis (Table 4). Difficulties in delivering the diagnosis were negatively associated with confidence in the diagnosis and not having enough tools was highly negatively associated with confidence in diagnosis. In other words, the more difficult it is for the PCP to deliver a diagnosis the less confident they are in diagnosing. Lack of knowledge or training and feeling that diagnosing dementia is not their job were not significantly associated with confidence in diagnosing. Related to importance of routine examinations, depression was positively associated with confidence in diagnosis, but cognitive examination was surprisingly negatively associated. Only the routine examination of depression was positively associated with confidence in diagnosis.

Table 2. Attitude and Knowledge study variables: Univariate description (percentage)

	Not at all	Slightly	Neutral	Very	Extremely
Difficulties when diagnose					
Not confident in the diagnosis (n = 92)	2.17	18.48	36.96	31.52	10.87
Lack of knowledge or training (n = 95)	6.32	27.37	35.79	21.05	9.47
Not enough tools (n = 91)	9.89	19.78	37.36	21.98	10.99
Difficult to deliver the diagnosis (n = 95)	4.21	24.21	18.95	41.05	11.58
Feel that this is not my role (n = 94)	37.23	34.04	15.96	10.64	2.13
Early diagnosis:					
Perceived Importance of early diagnosis (n = 94)	-	2.13	35.11	36.17	26.60
Importance of the EMR (Electronic medical record)					
Importance of 'start stop' of medicines in the EMR(n = 93)	-	4.30	9.68	25.81	60.22
Importance of reorganizing drugs at least once a year, among patients aged 65+ (n = 94)	-	-	-	17.02	82.98
Effectiveness of evidence based non-pharmacological treatment					
Outdoor activities (n = 93)	1.08	3.23	10.75	36.56	48.39
Support for primary caregiver (n = 94)	-	-	1.06	31.91	67.02
Daycare (n = 94)	-	-	6.38	35.11	58.51
Environmental adaptations (n = 94)	-	-	3.19	25.53	71.28
Music therapy (n = 92)	2.17	3.26	28.26	34.78	31.52
Importance of routine examinations for 65+ of					
Depression (n = 92)	-	-	9.78	32.61	57.61
Eye test (n = 92)	1.09	1.09	6.52	45.65	45.65
Dental examination (n = 92)	-	-	17.39	48.91	33.70
Cognitive examination (n = 92)	1.09	2.17	27.17	38.04	31.52
Hearing test (n = 92)	1.09	1.09	8.70	48.91	40.22

Table 3. Training needs of PCPs: Univariate description (percentage)

Importance of getting training on:	Not at all	Slightly	Moderately	Very	Extremely important
Non-pharmacological interventions (n = 93)	-	2.15	11.83	30.11	55.91
Pharmacological treatment to prevent health deterioration (n = 92)	-	4.35	14.13	34.78	46.74
Pharmacological treatment for behavioral or mental problems (n = 93)	-	3.23	4.30	36.56	55.91
Care in the community (n = 92)	-	2.17	5.43	29.35	63.04

The second analysis revealed that country of studies was positively associated to the perceived level of lack of knowledge or training, meaning that PCPs that trained in Israel reported a higher level of perceived lack of knowledge or training (Table 4).

Early diagnosis, importance of the EMR, effectiveness of non-pharmacological treatment and importance of routine exams were not associated. Graduation year and work experience, each one separately, were highly associated with age. Therefore, because of multicollinearity (VIF = 17.59 and VIF = 13.99, respectively), these variables were excluded from further analysis.

Some interesting themes were raised in the qualitative data. These include difficulty making a diagnosis related to barriers such as *personal* (no treatment to offer, lack of knowledge, confidence or, time, emotional, fears), *the patient & family* (giving "bad news", planning for the future, getting their cooperation) and *the system* (bituach leumi - National Insurance Institute (NII) policies; lack of psycho-geriatricians, community services and nurse practitioners. These are best exhibited in the following quotes:

'- even if I make a diagnosis – it's meaningless

because bituach leumi (NII) will not allot a home caregiver for the PwD'

- ' there's not enough community services, or

support groups'

- ' we need knowledge of the community services that exist and there needs to be more services'

Table 4. OLS regression (Beta Coefficient), n = 79

Variables	Confidence in diagnosis	Lack of knowledge or training
Background		
Age	-0.020	-0.164
Gender ^a	0.234*	-0.061
Country of studies ^a	-0.109	0.267**
Familiar with someone with dementia ^a	-0.008	0.024
Difficulties when diagnose:		
not confident in the diagnosis	NA	-0.025
lack of knowledge or training	0.025	NA
feel that diagnosis of dementia is not my job	0.011	0.397***
difficult to deliver diagnosis	-0.339**	0.008
not enough tools	-0.600***	0.444**
Early diagnosis:		
Perceived Importance of early diagnosis	0.063	0.105
Importance of the EMR:		
Importance of start stop of medicines in the EMR	-0.205	0.045
Importance of reorganizing drugs at least once a year, among patients aged 65+	0.017	0.110
Effectiveness of evidence based non-pharmacological treatment:		
Outdoor activities	-0.238	0.003
Support for primary caregiver	-0.108	-0.002
Daycare	0.294	0.154
Adjustment of surrounding	-0.113	0.102
Music therapy	0.129	-0.160
Importance of routine examinations for patients 65+:		
Depression	0.238*	-0.001
Eye examination	0.134	-0.219
Dental examination	0.016	0.086
Cognitive examination	-0.291*	0.050
Hearing test	0.122	-0.031
Pseudo R-squared	43.83	45.87

^a Reference categories: **Gender** -male; **Studies_country** – abroad; **Familiar_with_categorical**- no one familiar;

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The first multi-variable OLS regression analysis (table 4 first column) related to confidence in diagnosis reveals that: age, country of studies and familiarity with a PwD

Discussion

The aim of our study was to explore Israeli primary care physicians (PCPs) knowledge, attitudes, practices as well as the barriers relating to care of people with dementia (PwD) and their families. National consensus guidelines recommend that the diagnosis and management of patients with dementia should largely be the responsibility of PCPs (22). In our study, we found that 98% of the PCPs felt that it is

important to diagnose dementia early in its progression. The overwhelming majority of PCPs also appreciate that it is their task to diagnose dementia (87%), unfortunately, 80% do not feel confident in making this diagnosis and 66% feel they are lacking knowledge or training to do so. PCPs feel they need more training in non-pharmacological interventions (86%), pharmacological treatments to prevent deterioration (82%), pharmacological treatment for

behavior problems or mental problems (92%), as well as more information on community services (92%). In open-ended questions, they also requested more training on updates about medications, National Long Term care laws, and rights of the caregivers. PCPs that trained in Israel reported a higher level of perceived lack of knowledge or training. In relation to difficulties when diagnosing, feeling that diagnosing dementia is not their job, as well as not having enough tools, was significantly associated with perceived lack of accomplishing this would be in locally run CME workshops and training days (37). Some topics that should be included, based on our findings in this study, would be the variety of easy to use screening tools and how to use them, local community services available both for the PwD and their family, and how to deliver the diagnosis of dementia. PCPs should also be taught about other available health care professionals within the health care system such as occupational therapists who can assist with comprehensive cognitive and affective assessments.

As to the topic of evidence based non-pharmacological interventions, while 96% of the PCPS were aware that such interventions exist and recognized the high importance of such interventions, surprisingly only 66% were aware of the strength of music as a therapeutic tool with PwD. This is a tool that is easy for families to use at home with a PwD, and something PCPs could recommend to families and would be another topic important to include in a training (47–49).

We also need to enhance PCP's confidence in making the diagnosis and delivering it to patients and their families. In our study we found that the more difficult it is to deliver a diagnosis, the less confident PCPs are in diagnosing. More research is needed in order to better understand this lack of confidence in order to plan appropriate training programs to help PCPs in this area.

In our study, the PCPs also mentioned other barriers to optimum dementia care which were related to the EMR system. For example, the validated dementia screening tools are not easily accessible in the EMR.

Although, in Israel, there are many screening tools that PCP's are mandated to use for various other serious conditions including mammography and colorectal cancer, there is no national or health insurance organization mandated depression or cognitive screening process for the over 65's. This is in clear distinction to the results from our study with the overwhelming majority of PCPs (91%) reporting on the importance of routine screenings for depression. Further studies will be needed to understand why, while (70%) of PCPs in our study felt cognitive testing was important, the percentage is much less than PCPs who felt that depression screening is important.

In the open-ended questions, we found numerous suggestions from PCPs for improvements of the EMR system. These suggestions included automatic pop ups to retest cognitive ability before renewing medications once a year, easy referral to geriatrician and cognitive occupational therapist, and help from nurse with medications. As well they mentioned including information on how to do a nursing care evaluation, how to deal with time issues (schedule a double appointment), and working with an interdisciplinary team (geriatrician, nurse, nurse practitioner rehab, social worker).

Other improvements could include technology and artificial intelligence tools to help PCPs in dementia care. For example giving suspected dementia patients a tablet administered comprehensive cognitive assessment tool that automatically returns results to the PCP using pre-programmed artificial intelligence tools which will analyze the results for the physician.

Our study has shed light on training needs for PCPS as well as suggested health care delivery system changes, which could possibly be incorporated in the NSPD, in order to improve care of people with dementia in Israel. There are numerous topics for further research including comparing perceived lack of knowledge of Israeli PCPs related to dementia care with their actual knowledge in order to plan appropriate training programs.

Strengths and Limitations: The response rate of completed questionnaires (24%) was low. This is in keeping with the fact that, physicians are a

professional group with low survey response rates in general. The small sample size is a limiting factor. As well as the fact that the sample consists of PCPs who chose to attend a conference – highly pre-selected sample.

The strengths of the study are the inclusion of open ended questions. It is noteworthy that those who did fill out the questionnaire did so thoroughly, with many even answering the open-ended questions giving more depth to the data collected.

Conclusion

Our findings support and enrich current research about self-reported knowledge, attitudes, confidence and practices amongst PCPs. Results from the survey may help policy makers to plan appropriate interventions to meet the training and system needs of PCPs and adapt the national dementia policy guidelines into practice at the local level. Such things

as providing easy to use screening tools that are accessible in the EMR, training for use of these tools as well as promoting integrative care may be changes that are not difficult to implement, yet may positively influence dementia care immensely.

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