Depression and Quality of Life and Their Effect on Health Care Utilization

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ABSTRACT

OBJECTIVE: To examine use of health care resources by levels of depression and quality of life (QOL). METHODS: The Longitudinal Investigation of Depression Outcomes (LIDO) is an observational study measuring depression and its economic and QOL correlates in patients visiting primary care clinics in six international cities (Barcelona, Be'er Sheva, Melbourne, Porto Alegre, St. Petersburg, and Seattle). Health care utilization was assessed using an interview-based resource utilization questionnaire (RUQ) collecting information on the type, number and length of health care visits. For our analysis, the total time spent with a health care professional was calculated. Centers for Epidemiologic Studies – Depression (CES-D, representing symptom-based severity of depression) and Quality of Life Depression Scale (QLDS, depression-specific quality of life) data were gathered from a sample of patients exhibiting depressive symptoms, but not necessarily diagnosed with major depression. A concurrent conditions list was also administered to indicate presence of more physical chronic illnesses. RESULTS: Using the cross-sectional baseline measurement point, a total of 2359 patients were evaluated across the sites. Dividing the population by CES-D scores (<20, >=20), all sites except St. Petersburg had a pattern where those with lower CES-D scores (less depressive symptomotology) spent less time with their doctors than those with more moderate to severe depression (ranging from 1 minute in Barcelona to over 10 minutes in Seattle). Comparing groups split by mean quality of life scores, a similar pattern (except in St. Petersburg) was noted with those having lower quality of life spending less time with their health care provider (1 minute in Melbourne to 10 minutes in Seattle). CONCLUSION: With the exception of the site in St. Petersburg, primary care patients who self-report depressive symptoms and lower quality of life tend to spend more actual contact time with their health care providers.

METHODS

Data Collection:

The Longitudinal Investigation of Depression Outcomes (LIDO) utilized a six-site, cross-national observational study design. Patients coming for care at participating primary care facilities were invited to complete the screening assessment. Using a cut-point of 16 or above on the Centers for Epidemiologic Studies – Depression Scale (CES-D), those who met eligibility criteria (i.e., age 18-75, able and willing to participate in all scheduled visits, provide adequate locator information, willing to sign consent), were enrolled and invited to a baseline visit.

In addition to measurement of depression symptoms (CES-D) and quality of life (the Quality of Life Depression Scale (QLDS)), resource utilization of enrolled subjects was assessed via an interviewer-led questionnaire containing internationally comparable items of potential service receipt called the Resource Utilization Questionnaire or RUQ (see figure 1).

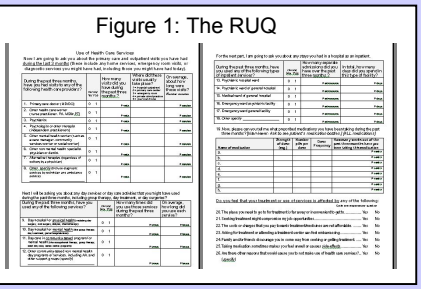
A range of primary care, psychiatric, social and general medical services were identified which together were considered a comprehensive profile of potential service receipt for the patient population in the six sites. The range of identified services was based upon the local clinical experiences of the site investigators and previous studies of service utilization in the mental health field. Of the three main categories of service contact (*primary care and outpatient services*, *day care services*, and *inpatient hospital services*), for this analysis, we focussed only on the **outpatient services**, specifically total time spent with the primary health care provider taking place in a hospital outpatient department, primary care centre, private clinic/practice, or the patient's own home.

An iterative process of cross-cultural validation was pursued in order to ensure standardised definitions and semantic equivalence of services across sites, resulting in a finalised baseline version of the service receipt schedule, which was subsequently translated into the local language of each of the six study sites.

Analysis:

Using the cross-sectional baseline measurement point, a total of 2359 patients were evaluated. Total time spent with their primary health care provider was calculated from the RUQ "primary care and outpatient visits" section. Group differences were assessed using analysis of variance statistics.

Figure 1: The RUQ



OBJECTIVES

To examine use of health care resource utilization by levels of depression and quality of life (QOL) among depressed primary care patients.

RESULTS

Sample:

Be'er Sheva, Israel n=383 | Barcelona, Spain n=472 | Melbourne, Australia n=437 | Porto Alegre, Brazil n=391 | Seattle, WA, USA n=366 | St. Petersburg, Russia n=310

Table 1: Sociodemographics

	Age (mean (SD))	Gender (% female)	Marital (% married)	Education (mean yrs)	Income* (USD) (median/month)
Be'er Sheva	41.4 (14.3)	62	67	11.9 (2.7)	842
Barcelona	41.5 (15.2)	71	56	10.7 (3.4)	564
Melbourne	39.4 (14.3)	65	26	12.5 (3.8)	491
Porto Alegre	39.9 (13.6)	75	53	9.3 (3.4)	178
Seattle	41.8 (15.0)	67	48	13.3 (2.3)	1700
St. Petersburg	47.0 (16.2)	72	45	11.8 (3.5)	35

Dividing the population by CES-D scores (<20, >=20), all sites except St. Petersburg had a pattern where those with lower CES-D scores (less depressive symptomotology) spent less time with their doctors than those with more moderate to severe depression (ranging from 1 minute in Barcelona to over 10 minutes in Seattle) (Figure 2). Comparing groups split by mean quality of life scores, a similar pattern (except in St. Petersburg) was noted with those having lower quality of life spending less time with their health care provider (1 minute in Melbourne to 10 minutes in Seattle) (Figure 3).

Figure 2: The RUQ

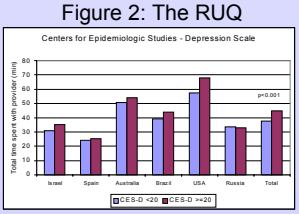


Figure 3: The RUQ

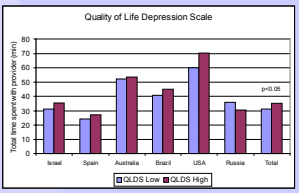


Figure 4: The RUQ

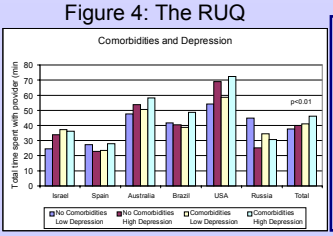


Figure 4 shows results by dividing the population into quartiles according to depression levels and comorbid conditions. In most cases, those patients with comorbidities and depression spend the most time with their providers.

CONCLUSION

With the exception of the site in St. Petersburg, primary care patients who self-report depressive symptoms, lower quality of life, and those with comorbid conditions tend to spend more actual contact time with their health care providers.

The Longitudinal Investigation of Depression Outcomes (LIDO) study is a cross-national observational study of major depression and its correlates. It has been carried out in six field study centers involved in the development of the WHOQOL measure (Australia, Brazil, Israel, Spain, USA, and the Russian Federation) and was coordinated by the Health Research Associates, Inc. Department of Study Advisors, and the Senior Investigators in each of the six field centers. Eli Lilly and Co., Indianapolis, Indiana, USA, provided the overall project sponsorship, and Health Research Associates, Inc. (HRA), served as the International Coordinating Agency for the study. The LIDO Group consists of:

The Research Team: Donald Patrick (University of Washington, Seattle, Washington, USA); Don Buesching‡Carol Andreasen‡Michael Treglia (Eli Lilly and Co., Indianapolis, Indiana, USA); Mona MartinDon Bushnell (Health Research Associates, Inc., Seattle, Washington, USA); Diane Jones-Palm (Health Research Associates, European Office, Frankfurt, Germany); Stephen McKenna (Galen Research, Manchester, England); and John Orley^Rex Billington^ (World Health Organization, Mental Health Division, Geneva, Switzerland).

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Site Investigators: Helen Herrman (University of Melbourne, Australia); Marcelo Fleck (Federal University of the State of Rio Grande do Sul, Brazil); Marianne Amir (Ben-Gurion University, Beer-Sheva, Israel); Ramona Lucas (Barcelona, Spain); Aleksandr Lomachenkov (Bekhterev Psychoneurological Research Institute, St. Petersburg, Russia); and Donald Patrick (University of Washington, Seattle, Washington, USA).

*Indicates those who have since changed location or status with the study.

LIDO

Longitudinal Investigation of Depression Outcomes