Israeli Psychiatrists Report on Their Ability to Care for Individuals with Intellectual Disability and Psychiatric Disorders

Shirli Werner, PhD,[1] Itzhak Levav, MD, Msc,[2] Mike Stawski, MD, BS, MRCPsych,[3] and Yakov Polakiewicz, MD, MHA[4]

[1] *Paul Baerwald School of Social Work and Social Welfare, The Hebrew University of Jerusalem, Jerusalem, Israel*
[2] *Ministry of Health, Jerusalem, Israel*
[3] *Schneider Children's Medical Center in Israel, Petah Tikva, Israel*
[4] *Mental Health Center, Tirat Hacarmel, Israel*

ABSTRACT

Background: The Convention on the Rights of Persons with Disabilities enshrines the right of people with intellectual disability to optimal mental health services. However, the literature suggests that psychiatrists' ability to meet such a standard is questionable. Psychiatrists' self-assessment regarding their training, knowledge and skills in working with this population was examined, as well as the availability of continuous education resources.

Methods: A questionnaire was completed by 256 psychiatrists working within the public sector in Israel.

Results: Training in the field was very low; average level of self-perceived knowledge and skills was found to be slightly below the midpoint of the scale, while actual knowledge, as assessed through a case vignette, was found to be low for all psychiatrists, in particular for general psychiatrists.

Discussion: Results point to an urgent need to increase the level of knowledge and skills of psychiatrists and improve the level of services offered to people with intellectual disabilities and mental health problems. Various options for achieving this are presented.

INTRODUCTION

Dual diagnosis (DD) refers to the coexistence of intellectual disability (ID) and psychiatric disorder. The reported overall prevalence rate of ID ranges between 1% to 3% of the global population (1, 2). Developed countries have consistently shown the prevalence rate of psychiatric disorder among people with ID to be significantly higher than people without ID. For example, a British study found a point prevalence rate of 39% of ICD-10 diagnoses among children between 5 to 15 years old with ID living in the community (3). Similarly, a study in Western Australia cross-linked population-based psychiatric and ID registers and found a life-time prevalence rate of 32% of co-occurring ID and psychiatric disorder (4). However, this study only took into account people with DD who had been treated in the public mental health system, a likely conservative estimate (4). As another example, a population-based study conducted in the U.K. has found a 40.9% point-prevalence of clinically diagnosed mental-ill health among adults with intellectual disabilities (5).

There are no Israel-based epidemiological data on the rate of DD. As of 2009, approximately 34,000 individuals, or about 0.5% of the population, have been legally defined as having ID (6). However, this is an administrative estimate based on those people known to the Ministry of Social Affairs. Assuming that the prevalence rate of mental health problems among people with ID among Israelis is as in other countries; between 10,000 and 27,000 Israelis have a combination of ID and psychiatric disorder.

Most countries, including Israel, have assumed responsibility for the treatment, wellbeing and quality of life of individuals with DD by signing the UN Convention on the Rights of Persons with Disabilities (CRPD). The CRPD was signed by 153 nations and ratified by 118 by August of 2012 (Israel, which signed the CRPD on March

Address for Correspondence: ✉ Dr. Shirli Werner, The Paul Baerwald School of Social Work and Social Welfare, The Hebrew University of Jerusalem, Mount Scopus, Jerusalem 91905, Israel shirlior@mscc.huji.ac.il

30, 2007, has yet to ratify it). Signing the convention indicates the intention of a country to be bound by the treaty and refrain from acts that would contravene it (7). Recall that the Preamble of the CRPD emphasizes "the importance of mainstreaming disability issues". Further, it stresses the need to "provide persons with disabilities with the same range, quality and standard of free or affordable health care and programs as provided to other persons" (Article 25).

Recently, the European Regional Office of the World Health Organizations (EURO/WHO), to which Israel belongs, has reaffirmed its support of the CRPD by adopting the European Declaration on the Health of Children and Young People with Intellectual Disabilities and their Families (November 2010) (8). This Declaration states unequivocally that children and young people with ID have the same rights to health and social care, education, vocational training, protection and support as other children and young people. Thus, to achieve optimal quality of life for individuals with ID, equal opportunities are to be assured for stimulating and fulfilling lives in the community and with their families. This requires, *inter alia,* equal access to health and mental health care, including specialist care when needed.

It follows from both the CRPD and the 2010 EURO/WHO Declaration that mental health services are especially important for individuals with ID, given the relatively high risk for mental disorders among them (5, 9). Accordingly, psychiatrists should be aware of this high comorbidity, and be able to properly diagnose and care for these individuals to the same extent than they do with regard to individuals without ID (equality) or even more, given the heightened needs of individuals with DD (equity).

Currently, people with DD in Israel are cared for within the general mental health services, the assumption being that these services can adequately meet the compounded needs of this patient group. The validity of this assumption has not been assessed in practice. One way to explore it would be to assess how well psychiatrists regard themselves to be equipped to provide proper diagnosis and care (10). This question is highly pertinent, as psychiatrists in various studies have reported that their residency training in the field of ID is very limited (11). For example, in a study conducted among Queensland psychiatrists in Australia, 88% reported that they had received no training relating to mental health needs of adults with ID within the past 12 months (12). This is in contrast with Article 4 of the CRPD, which states that: "state parties undertake to promote the training of professionals and staff working with persons with disabilities in the rights recognized in the present Convention, so as to better provide the assistance and services guaranteed by those rights" (7).

During the 1990s, two surveys conducted in Australia focused on the attitudes and perceptions of psychiatrists, psychiatrists-in-training and medical officers (13, 14). Participants in these studies felt inadequately trained and expressed concerns that people with DD are receiving inadequate care in the hospital and community setting (13, 14).

About a decade later three additional studies were conducted based on the same questionnaire. In one of these studies, conducted in Australia, training and education in the assessment and diagnosis of mental illness in adults with ID was found to be highly needed. Further, these psychiatrists also noted the need for evidence-based guidelines for psychotropic drug use as well as advice regarding service options for this population (12). Two other studies examined the knowledge of Australian general psychiatrists and U.K. learning disability psychiatrists (15, 16), and compared the findings between these two groups (16). U.K. psychiatrists compared with their Australian counterparts reported a higher level of disagreement with the statement that "mental health needs are uncommon in adults with ID" and with the statement that "there is seldom the need to investigate psychiatric symptoms in adults with severe ID." Furthermore, U.K. psychiatrists were more confident than their Australian peers in adopting a developmental approach when working with adults with ID. An additional study, conducted in Canada, utilized a focus group design, and found that psychiatric staff in emergency room hospitals felt they lacked information on available services, knowledge and experience necessary to serve this population adequately (17).

No study has so far examined the current level of training and knowledge in the field of the dual diagnosis of ID and psychiatric disorders in Israel, nor the specific educational resources available to local psychiatrists working in the public sector.

The objective of this study was to explore psychiatrists' self-assessment regarding their training, knowledge and skills in the field of ID and psychiatric disorders, and the continuous education resources which are available in their places of work. This study was conducted with a grant provided by the Israel National Institute for Health Policy Research and full results of the entire study can be found in the grant report (18).

METHODS

POPULATION AND SAMPLING

The research population included all psychiatrists (N=870) working in the public sector, as per the estimation our research team made based on a telephone inquiry to all the public sector units. Our target sample included psychiatrists working in all those settings that agreed to participate in the study (n=679)

Data were collected from a total of 256 psychiatrists that were working during the period of April 2010 through February 2011 in all psychiatric hospitals; 43 of the 73 clinics; and 5 of the 13 general hospitals in the country. The response rate was 38% (n= 256), if the denominator is based on our target sample (n=679), or 29.5%, if based on the total number of psychiatrists in the public sector (N=870)

QUESTIONNAIRE

Data were collected via a self-administered questionnaire. Demographic and professional background variables included age, gender, number of years since completion of psychiatric residency, current position (psychiatrists-in-training, fully-qualified psychiatrists, fully-qualified psychiatrist who are directors), and percentage of working hours dedicated to people with ID.

Self-assessed knowledge and skills: Participants were asked to report if they had received any previous training in the diagnosis and treatment of people with DD (yes or no), and rate their agreement on the need to improve the current state of training, on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). Further, participants were asked to report their self-assessed knowledge and skills on the diagnosis and treatment of people with DD, measured by a Likert scale, ranging from 1 (very low level of skills/ knowledge) to 5 (very high level of skills/ knowledge).

Objective knowledge: Participants were given two clinical vignettes (tailored to a general psychiatrist or child and adolescent psychiatrist) (see Figure 1). The vignette detailed a hypothetical patient with ID referred for psychiatric treatment. Respondents were asked to provide the three most likely causes for the patient's problems (open question). Further, from a list of six options, they were asked to select the two preferred initial actions. The face validity of the vignettes and the correct answers (i.e., three most likely causes and the two correct actions) were determined by independent consultation with three psychiatrists working in the field of DD. For the general psychiatry vignette, the likely causes were: dementia, depression and hypothyroidism; and the two correct preferred actions were to take a detailed case history and to take a blood test to examine for possible hypothyroidism. For the child/ adolescent vignette the likely causes were ADHD, and anxiety/depression or management condition: improper school placement. The two correct initial actions were to take a detailed history and to request a developmental assessment.

Figure 1. *Description of Case Vignettes*

General psychiatry vignette
Meni, a 50-year-old man with Down syndrome, has been living in a hostel for people with intellectual disability for the past 10 years. He is brought to the psychiatric outpatient department with a complaint by his carers of "not being himself" over about the past year. He has been unwilling to follow his normal routine of attending a sheltered work setting; has not partaken in social activities in the hostel, and has possibly lost some skills (but this last point is not definite).

In your opinion, what are the three most likely causes for Meni's condition?
Correct answers (determined via consultation):
1. Dementia
2. Depression
3. Hypothyroidism

Based on the above information, your two preferred initial actions would be to:
1. Initiate treatment with medication (which one?)
2. Take a detailed history.
3. Refer to a neurologist.
4. Politely explain that this is not something that psychiatrists deal with, and refer to the ID section within the Ministry of Welfare.
5. Perform a blood test (which one?)
6. Developmental testing/ IQ testing

Child/ adolescent psychiatry vignette
Yossi is an 11-year-old boy attending a school for mildly intellectually disabled children. He is brought to you because he "cannot sit still," is at times destructive of property and, at times, mildly aggressive. His attention span is about 5 minutes, even for activities that should be fairly interesting.

In your opinion, what are the three most likely causes for Yossi's condition?
Correct answers (as determined by consultation):
1. Attention deficit / hyperactivity disorder
2. Anxiety / depression / emotional disturbance
3. Inappropriate school placement (related answers, such as "wrongly assessed level of ID" were considered acceptable, since they suggested an understanding of a possible educational misplacement, rather than a primary psychiatric problem).

Based on the above information, your two preferred initial actions would be to:
1. Initiate treatment with medication (which one?)
2. Take a detailed history.
3. Refer to a neurologist.
4. Politely explain that this is not something that psychiatrists deal with, and refer to the ID section within the Ministry of Welfare.
5. Perform a blood test (which one?)
6. Developmental testing/ IQ testing

Sources of continuous education: Participants were asked to evaluate what proportion of learning resources (books, journals, seminars, staff meetings, journal clubs, and research projects) in their work place was devoted to DD. Rankings were: 0-1%, 2-5%, 6-20%, > 20% or not relevant (when the specific learning resource was not available within the work setting). Using the same rankings, they were also asked to judge what proportion of each of the learning resources should be devoted to DD.

Procedure: To recruit potential participants, a letter was sent to the directors of all psychiatric hospitals, community psychiatric clinics and psychiatric departments in general hospitals explaining the study's aims and methods with the request to facilitate the participation of all psychiatrists (qualified psychiatrists and psychiatrists-in-training) in the self-administered survey. Questionnaires were only distributed to psychiatrists working in departments whose directors granted permission. Various means were used to enhance participation, including the use of the Israel Psychiatric Association website to remind potential participants to complete the questionnaire.

ETHICAL CONSIDERATIONS

The study's protocol was approved by the Ethics Committee of the School of Social Work and Social Welfare at the Hebrew University of Jerusalem.

STATISTICAL ANALYSES

The overall mean of subjective (self-perceived) knowledge and skills was examined. For objective knowledge (as assessed by the vignettes), the percentage of psychiatrists answering each of three correct responses was calculated. Further, the total number of correct answers concerning the possible causes of the problem presented was calculated (scores ranged from 0 to 3). Differences in subjective knowledge, skills and objective knowledge according to participants' demographic and professional background variables and their work settings were examined via one-way ANOVA for categorical variables. For this purpose, psychiatrists' age was dichotomized into "younger" (aged up to 48 years) and "older" (aged 49 years and above). Percentage of work time dedicated to people with ID was dichotomized into "up to 5%" and "5% or more." Hierarchical regression models were utilized to examine which of the demographic and professional background variables were the strongest predictors of subjective knowledge and skills, and of objective knowledge. Only those variables that were significant at the bivariate level were used in these regressions. In the last step of the analyses, we mapped the distribution of the availability of educational resources as perceived currently and optimally, and utilized McNemar's tests to examine differences between both.

RESULTS

Psychiatrists working in different settings were represented in the sample; their position in the setting was stratified into: heads of psychiatric hospitals, heads of inpatient or outpatient units, qualified psychiatrists in non-managerial positions, and psychiatrists-in-training, 53.6% were men. The average age was 47.9 years, with a range from 28 to 68 years. Excluding psychiatrists currently in training, participants were on average 14.1 years (SD=8.4) post-residency. Of the respondents, 10.2% stated that they did not dedicate any time to working with people with ID; 60.2%, that they were spending up to 5.0% of their working time with these patients, and 29.4% more than 5.0% of their time (Table 1).

KNOWLEDGE AND SKILLS

Of the respondents, 90.2% stated that they did not possess specific training in the diagnosis and treatment of people with DD, but 86.9% "strongly" or "very strongly

Table 1. *Psychiatrists by Demographic and Professional Background Variables (N=256)*

	N	%
Work position		
Director of hospital, clinic or department	97	38.2
Fully-qualified psychiatrist	98	38.6
Psychiatrist-in-training	59	23.2
Field of psychiatric practice		
General psychiatry	205	80.7
Child and adolescent	49	19.3
Main place of work		
Outpatient clinic in a psychiatric hospital	56	22.1
Outpatient psychiatric clinic in a general hospital / community clinic	60	23.7
Inpatient ward in a psychiatric hospital	116	45.8
Inpatient psychiatric ward in a general hospital	12	4.7
Other settings	9	3.6
Specialized unit for autism or ID in the facility		
Yes	38	17.0
No	186	83.0

Table 2. *Psychiatrists by Level of Subjective Knowledge and Skills and Objective Knowledge and by Background Characteristics*

	Subjective Knowledge		Clinical Skills		Objective Knowledge (general psychiatrists)		Objective Knowledge (child psychiatrists)	
	Mean (SD)	t-test or ANOVA	Mean (SD)	t-test or ANOVA	Mean (SD)	t-test or ANOVA	Mean (SD)	t-test or ANOVA
Gender								
Women	2.82 (0.71)		2.89 (0.76)		1.33 (0.76)		1.94 (0.56)	
Men	3.03 (1.00)	1.93*	3.01 (1.02)	1.07	1.27 (0.74)	0.55	2.14 (0.77)	1.09
Age in yrs.								
Younger (28-48)	2.73 (0.85)		2.71 (0.89)		1.42 (0.67)		2.03 (0.72)	
Older (49-68)	3.14 (0.89)	3.73***	3.19 (0.86)	4.31***	1.17 (0.80)	2.31*	2.00 (0.59)	0.18
Years of experience (Fully qualified)								
1 to 9	3.10 (0.69)		3.04 (0.66)		1.37 (.71)		2.23 (.60)	
10 to 17	3.21 (0.90)		3.25 (0.93)		1.10 (.79)		2.00 (.77)	
18 to 36	3.05 (0.86)	0.67	3.10 (0.82)	1.13	1.18 (.69)	1.68	2.07 (.46)	0.47
Field of practice								
General	2.88 (0.87)		2.90 (0.89)		Not		Not	
Child / adolescent	3.10 (0.97)	1.56	3.11 (0.93)	1.43	relevant		relevant	
Time dedicated to people with ID								
Up to 5%	2.79 (0.88)		2.81 (0.91)		1.24 (.72)		2.00 (.60)	
More than 5%	3.27 (0.83)	3.99***	3.31 (0.78)	4.07***	1.45 (.80)	1.78	2.04 (.73)	0.22
Training in the field of DD								
No	2.86 (0.85)		2.87 (0.85)		1.32 (.74)		1.98 (.66)	
Yes	3.63 (1.01)	4.09***	3.75 (0.99)	4.75***	1.29 (.77)	0.12	2.11 (.60)	0.56
Position at work								
Trainee psychiatrists	2.31 (0.79)		2.34 (0.88)		1.25 (.72)		2.11 (.57)	
Fully qualified psychiatrists	3.18 (0.77)		3.17 (0.80)		1.21 (.76)		2.10 (.64)	
Directors	3.10 (0.87)	23.61***	3.15 (0.83)	21.58***	1.53 (.74)	2.83	1.80 (.77)	1.15
Facility has a specialized unit for people with autism or ID								
No	2.91 (0.93)		2.95 (0.92)		1.24 (0.76)		1.91 (0.68)	
Yes	3.05 (0.70)	0.87	2.97 (0.84)	0.13	1.59 (0.73)	2.25*	2.13 (0.64)	1.08

*p<.05; **p<.01; ***p<.001

agreed" that there is need to improve the current state of training. Overall, the mean level of subjective knowledge was 2.9 (SD=0.9) and of skills were 3.0 (SD=0.9), (of a maximum of 5) indicating that respondents' subjective rating of their knowledge and skills were slightly below the midpoint of the scale. Further, 28.6% and 30.4% of the psychiatrists reported that they possess low levels of knowledge and skills, respectively.

Of all participants, 187 (91%) answered the general psychiatrists' vignette; 54, the child/ adolescent psychiatrists' vignette; 20 answered both; and 10 answered neither. Of the general psychiatrists, 71.4% noted depression as a likely cause, 54.6%, dementia and 4.3%, raised the possibility of hypothyroidism. Putting these finding together, only four psychiatrists (2.1%) gave three correct causes; 76 (40.6%), two; 79 (42.2%), one; and 28 (15.0%), failed to correctly name any of the three most likely causes which had been derived by consensus as described above. As for the preferred course of action, 213 provided answers (i.e., although some did not provide answers for the cause, they did provide an answer for preferred action). Of these psychiatrists, 187 (87.8%) selected taking a detailed history while only 17 (8.0%) pointed to the correct blood test.

As for the child/ adolescent vignette, 52 (96.3%) suggested the possibility of ADHD; 36 (66.7%), of anxiety; and 21 (38.9%), of inadequate school placement. Putting these findings together, 12 participants (22.2%) provided all three consensus-derived causes; 31 (57.4%), two; and 11 (20.4%), one. As for the preferred course of action, 50 psychiatrists (92.6%) selected taking a detailed history while 23 (42.6%) pointed to the need to request a developmental assessment.

Table 2 shows differences in subjective knowledge and skills and objective knowledge according to demographic and professional background variables. Higher levels of subjective knowledge and skills were found among male psychiatrists, and those who were older, dedicated more time to individuals with ID, had had previous training in the field of DD, or had a higher position in the hier-

archy. A higher rate of correct answers to the general psychiatry case vignette questions was found among younger psychiatrists and among psychiatrists working in settings that have a specialized unit for people with ID. No differences were found in objective knowledge of the child case vignette according to any of the demographic and professional background variables.

The regression models predicting subjective knowledge and skills and objective knowledge are shown in Table 3. The strongest predictors of subjective knowledge and skills were the psychiatrists' position at work, time dedicated to individuals with ID and having had training in the field of DD. All variables in the model were predictive of 26% of the variance in knowledge, and 29% of the variance in clinical skills. As for objective knowledge among general psychiatrists, 4% of the variance was predicted by being of younger age and working in an institution with a specialized unit for individuals with ID. As none of the variables examined were predictive of objective knowledge of child/adolescent psychiatrists at the bi-variate levels, this variable was not further examined in the regression models.

EDUCATIONAL RESOURCES IN THE WORK SETTING

Table 4 shows the proportion of educational resources devoted to individuals with ID in places of work as reported by the participating psychiatrists, as well as their opinion about what should be optimal. In general, psychiatrists reported a low percentage of resources being devoted to people with ID. For example, 35% and 48%, respectively, reported that 0-1% of the library books and journals were dedicated to DD. The availability of resources was especially low with regard to staff meetings, journal clubs and research projects (between 68% and 72% reported a virtual absence of these in their places of work [0-1%]), and most participating psychiatrists considered the availability of relevant learning resources in their work settings sub-optimal. The McNemar test showed a significant difference between the current and the optimal situation in each of the learning resources examined. For example, around 80% reported that 2-20% of library books and journals should be dedicated to DD, while around 85% reported that this proportion should exist for seminars, meetings and journal clubs.

Table 3. *Predictors of Subjective Knowledge, Skills and Objective Knowledge*

Variable	Knowledge (n=237)	Clinical skills (n=234)	Objective knowledge (general psychiatrists – n=164)
Demographic background variables			
Gender (women vs. men)	0.09	---	---
Age (younger vs. older)	0.09	0.14	-0.15*
Professional background variables			
Proportion of work time dedicated to people with ID (up to 5% vs. more than 5%)	0.26***	0.27***	---
Training in the field of DD (No vs. yes)	0.22***	0.27***	---
Position at work (psychiatrists-in-training vs. fully - qualified and directors)	0.32***	0.30***	---
Setting with specialized unit (No vs. yes)	---	---	0.16*
R^2	0.26	0.29	0.04
F	17.19***	24.25***	4.07*

Table 4. *Learning Resources in the Work Setting: Perception of the Current and Optimal Situations*

Resources	Current situation N (%)	Optimal situation N (%)	McNemar test
Library books	N=224	N=211	
0-1%	(34.8) 78	(3.3) 7	
2-5%	(34.8) 78	(37.9) 80	
>6%	(12.5) 28	(49.3) 104	
Not relevant	(17.9) 40	(9.5)20	130.4***
Journals	N=229	N=212	
0-1%	(47.6) 109	(6.6) 14	
2-5%	(30.6) 70	(43.9) 93	
>6%	(10.0) 23	(42.5) 90	
Not relevant	(11.8) 27	(7.1) 15	136.8***
Seminars	N=250	N=230	
0-1%	(71.6) 179	(7.4) 17	
2-5%	(16.4) 41	(59.6) 137	
6-20%	(2.8) 7	(26.1) 60	
20%>	(3.6) 9	(3.5) 8	
Not relevant	(5.6) 14	(3.5) 8	170.0***
Staff meetings	N=249	N=228	
0-1%	(63.1) 157	(8.8) 20	
2-5%	(24.1) 60	(57.9) 132	
>6%	(7.6) 19	(29.4) 67	
Not relevant	(5.2) 13	(3.9) 9	148.0***
Journal clubs	N=247	N=223	
0-1%	(71.3) 176	(8.5) 19	
2-5%	(13.0) 32	(57.8) 129	
>6%	(7.7) 19	(29.6) 66	
Not relevant	(8.1) 20	(4.0) 9	158.3***
Research projects	N=234	N=211	
0-1%	(67.5) 158	(14.7) 31	
2-5%	(10.7) 25	(43.1) 91	
>6%	(6.8) 16	(30.3) 67	
Not relevant	(15.0) 35	(11.8) 25	121.5***

***=p<.001

Two important differences in the learning resources were reported. First, a higher percent of journal clubs dedicated to the field of DD was found in settings that have specialized units for people with autism or ID, compared to other settings ($\chi^2_{(3)}=9.35$, $p<.05$). Specifically, 81.1% of the psychiatrists working in settings without specialized units reported that none or almost none (0-1%) of the journal clubs in the previous year were dedicated to DD, compared with 57.6% of psychiatrists working in settings with a specialized unit. Second, a higher percent of seminars in the DD field was reported by child/ adolescent psychiatrists than by general psychiatrists ($\chi^2_{(3)}=9.76$, $p<.05$). Specifically, 79.4% of the latter reported that 0-1% of seminars were dedicated to DD, compared with 62.2% of child/ adolescent psychiatrists. To complete this picture, 13.8% of general psychiatrists reported that 2-5% of seminars were dedicated to this topic as compared with 33.3% of child/ adolescent psychiatrists.

DISCUSSION

This study aimed to examine the current level of training, knowledge and skills regarding dual diagnosis (intellectual disability comorbid with psychiatric disorders) as reported by psychiatrists working in the public sector. The study also aimed to map the current state of educational resources in the field available to psychiatrists in public settings. Our findings show that training in DD was very low. Additionally, around a third of the participants reported of low level of knowledge and skills. Our study added the use of a clinical vignette to tap objective knowledge which pointed to a more worrisome picture. The findings showed that both child/ adolescent and general psychiatrists do not feel competent in the field. These findings mirror those obtained in other countries among psychiatrists, with regard to both a low level of knowledge (15-17) and a lack of training (11). Those studies, however, did not utilize objective measures. Finally, the availability of relevant learning resources was very low. Importantly, the psychiatrists themselves perceived a need for additional learning resources and for a higher level of training in the field of DD in general.

The discrepancy between subjective and objective ratings (subjective, around the mid-point of the scale and objective, lower) is a matter of concern, since psychiatrists who see themselves as having average abilities appear to actually possess lower levels of knowledge/skills. The above results indicate that the current state of training and knowledge of psychiatrists working within public sectors in Israel needs to be upgraded if we wish to provide individuals with DD with proper care. The low level of knowledge/skills may be attributed to the lack of formal training and available ongoing educational resources.

Several differences in knowledge according to demographic and professional variables are worth discussing. First, it is noticeable that child/adolescent psychiatrists had a higher level of objectively assessed knowledge, indicating that general psychiatrists are in greater need of additional training. Second, although older psychiatrists assess themselves as having a higher level of knowledge and skills than did younger psychiatrists, the case vignettes showed that this self-perception may not reflect reality adequately. This finding reinforces the need for ongoing training among psychiatrists at all levels of seniority, as has been stressed in other previous studies (15).

LIMITATIONS

The study results must be examined in light of several limitations. First, the sample included the views of a minority (about 30%) of all psychiatrists in the public sector. Possibly the psychiatrists who responded were more interested in the subject than non-respondents. Thus, if there is a bias, it is likely to be in the direction of higher levels of training and knowledge among respondents - though this cannot be stated with certainty. Further, it should be noted that this response rate is similar, or higher, than that obtained in other studies among psychiatrists (e.g., 15, 19, 20). Secondly, the sampling method was not random, although an attempt was made to get to most of the psychiatrists working in the public service. Thirdly, available learning resources, attitudes, self-perceived and objectively assessed knowledge and skills regarding other populations of patient were not examined. Thus, it is difficult to know whether there are similar deficiencies in other areas of psychiatry. Fourthly, and most importantly, our study utilized a self-report questionnaire; psychiatrists' knowledge and skills in real-life situations were not examined.

CONCLUSION

The results of this study are a call for action addressed to all professional bodies relevant to psychiatric training. The findings point to a need to begin (or strengthen) developing and implementing a proper across-the-board training program.

One strategy to improving the current situation may be by employing a "horizontal" approach, attempting to raise

the level of knowledge/ skills in the field of dual diagnosis among psychiatrists. However, as we learn from a study conducted in Australia, it seems that current mainstream services fail to meet the needs of this population (15). A second possibility is to provide care within dedicated or specialized services. This option is supported by studies pointing to the advantages of this model over the generic service model (16). However, specialist models contradict the normalization principle, and may lead to a lower level of services, particularly in countries with limited numbers of psychiatrists (21). Given the pros and cons of both the horizontal approach (generic services) as well as the dedicated (specialized) services, a third option may be appropriate in Israel. In this model, which is also supported by the findings of Torr et al. (15) from Australia, the training and care would be provided by a cadre of tertiary service specialists within the generic services. These experts would provide training/supervision to psychiatrists within the generic services to improve services for people with mild or moderate ID affected by more common and less severe problems, while taking direct clinical responsibility for people with severe ID and/or affected by complex problems.

Acknowledgement:

This research was conducted with a grant provided by the Israel National Institute for Health Policy Research. We would also like to thank the psychiatrists who participated in the study.

References

1. Harris J. Intellectual disability: Understanding its development, causes, classification, evaluation, and treatment: Oxford University, 2006.
2. Dua T, Mascarenhas M N, Mathers C D, Maulik P K, Saxena S. Prevalence of intellectual disability: A meta-analysis of population-based studies. Res Dev Disabil 2011;32:419-436.
3. Emerson E. The prevalence of psychiatric disorders in children and adolescents with and without intellectual disabilities. J Intellect Disabil Res 2003;47:51-58.
4. Morgan VA, Leonard H, Bourke J, Jablensky A. Intellectual disability co-occurring with schizophrenia and other psychiatric illness: Population-based study. Br J Psychiatry 2008;193:364-372.
5. Cooper SA, Smiley E, Morrison J, Williamson A, Allan L. Mental ill-health in adults with intellectual disabilities: Prevalence and associated factors. Br J Psychiatry 2007;190:27-35.
6. Gorbotov R, Ben-Moshe E, Ben-Simchon M. People with mental retardation. In: Tzeva Y, editor. Review of social services 2009 (in Hebrew). Jerusalem: Ministry of Social Affairs and Social Services, 2010: pp. 367-400.
7. UN General Assembly. Convention on the Rights of Persons with Disabilities: Resolution; adopted by the General Assembly, 24 January 2007.
8. World Health Organization. European Declaration on the health of children and young people with intellectual disabilities and their families: Better health, better lives. *EUR/51298/17/6*. Romania, 2010.
9. Dosen A, Day K. Treating mental illness and behavior disorders in children and adults with mental retardation. Washington, DC: American Psychiatric, 2001.
10. Patterson MH, Higgins RN, Dyck DG. A collaborative approach to reduce hospitalization of developmentally disabled clients with mental illness. Psychiatr Serv 1995;46:243-247.
11. Burge P, Ouellette-Kuntz H, McCreary B, Bradley EA, Leichner P. Senior residents in psychiatry: Views on training in developmental disabilities. Can J Psychiatry 2002;47:568-571.
12. Edwards N, Lennox N, White P. Queensland psychiatrists' attitudes and perceptions of adults with intellectual disability. J Intellect Disabil Res 2007;50:75-81.
13. Lennox N, Chaplin R. The psychiatric care of people with intellectual disabilities: The perceptions of trainee psychiatrists and psychiatric medical officers. Aust N Z J Psychiatry 1995;29:632-637.
14. Lennox N, Chaplin R. The psychiatric care of people with intellectual disabilities: The perceptions of consultant psychiatrists in Victoria. Aust N Z J Psychiatry 1996;30:774-780.
15. Torr J, Lennox N, Cooper SA, Rey-Conde T, Ware RS, Galea J, et al. Psychiatric care of adults with intellectual disabilities: Changing perceptions over a decade. Aust N Z J Psychiatry 2008;42:890-897.
16. Jess G, Torr J, Cooper SA, Lennox N, Edwards N, Galea J, et al. Specialist versus generic models of psychiatry training and service provision for people with intellectual disabilities. J Appl Res Intellect Disabil 2008;21:183-193.
17. Lunsky Y, Bradley EA, Durbin J, Koegl C. A comparison of patients with intellectual disability receiving specialized and general services in Ontario's psychiatric hospitals. J Intellect Disabil Res 2008;52:1003-1012.
18. Werner S, Levav I, Stawski M, Polakiewicz Y. Psychiatrists' knowledge, abilities and attitudes regarding treatment of persons with dual diagnosis: Israel National Institute for Health Policy Research, 2011.
19. Szabo CP, Kohn R, Gordon A, Levav I, Hart GAD. Ethics in the practice of psychiatry in South Africa. S Afr Med J 2000;90:498-503.
20. Alfonso CA, Olarte SW. Contemporary practice patterns of dynamic psychiatrists – survey results. J Am Acad Psychoanal Dyn Psychiatry 2011;39 7-26.
21. World Health Organization. Mental Health Atlas. 2011 [cited 2012] Available from: http://whqlibdoc.who.int/publications/2011/9799241564359_eng.pdf