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Clinical neuropsychology in Israel: history, training, practice and future challenges

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ABSTRACT

Objective: This is an invited paper for a special issue on international perspectives on training and practice in clinical neuropsychology. We provide a review of the status of clinical neuropsychology in Israel, including the history of neuropsychological, educational, and accreditation requirements to become a clinical neuropsychologist and to practice clinical neuropsychology. **Method:** The information is based primarily on the personal knowledge of the authors who have been practicing clinical neuropsychology for over three decades and hold various administrative and academic positions in this field. Second, we conducted three ad hoc surveys among clinical and rehabilitation psychologists; heads of academic programs for rehabilitation and neuropsychology; and heads of accredited service providers. Third, we present a literature review of publications by clinical neuropsychologists in Israel. **Results:** Most of the clinical neuropsychologists are graduates of either rehabilitation or clinical training programs. The vast majority of neuropsychologists are affiliated with rehabilitation psychology. The training programs (2–3 years of graduate school) provide solid therapeutic and diagnostic skills to the students. Seventy-five percent of the participants in this survey are employed at least part-time by public or state-funded institutions. Israeli neuropsychologists are heavily involved in case management, including vocational counseling, and rehabilitation psychotherapy. **Conclusions and future goals:** Although clinical neuropsychologists in Israel are well educated and valued by all health professionals, there are still several challenges that must be addressed in order to further advance the field and the profession. These included the need for Hebrew-language standardized and normalized neuropsychological tests and the application of evidence-based interventions in neuropsychological rehabilitation.

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History of neuropsychology in Israel

The development of clinical neuropsychology in Israel commenced analogously to its development in the Western World. The initial publications dealing with clinical neuropsychology

began to appear in Israel in the early 1970s. Two primary factors engendered these processes. First were the effects of scientific developments in western countries and in the former USSR, which were 'imported' by people who immigrated to Israel or completed their studies in neuropsychology abroad and later returned to Israel. The second was the impact of social welfare policies and the extensive defense activity that has been typical of Israel since its establishment in 1948.

The National Insurance Law was passed in 1953. This new edict guaranteed several years of full coverage for vocational rehabilitation processes to anyone documented as having a handicap, including neurological handicaps. The combination of affordable health insurance and eligibility for professional rehabilitation funded by the National Insurance Institute (NII), Israel's national social security agency, constitutes the welfare foundation on which clinical neuropsychology was established in Israel's civilian sector.

Not only does Israel differ from other countries in terms of its social welfare policies, but from a geopolitical perspective Israel has had to fight for its existence since its establishment. Along with this ongoing struggle is the great effort that Israel invests in rehabilitating its military veterans. This responsibility is one of the duties of the army, specifically the Defense Ministry Rehabilitation Department. Consequently, there are essentially almost unlimited resources that can be utilized for a soldier's rehabilitation. With this in mind, it makes sense that significant progress has been made in the clinical neuropsychology field by the well-funded rehabilitation services of the Defense Ministry Rehabilitation Department, similarly to the developments in the United States administrations after the Vietnam War and after its recent involvement in the Middle East. These developments have trickled into the civilian sector as well.

As explained in a prior survey article on the development of neuropsychology in Israel (Vakil, 1994), the initial clinical applications of neuropsychology began to appear in the early 1970s. The founding of initiatives at the Loewenstein Rehabilitation Center and joint initiatives between the psychology departments at Bar Ilan and Tel Aviv University and the Defense Ministry Rehabilitation Department are several examples.

In 1971, the Rehabilitation Center for Veterans after Traumatic Brain-Injury (TBI) in Jaffa, Israel was established (Katz, 1991). It was funded by the Rehabilitation Department of the Defense Ministry, the governmental department responsible for defending the State of Israel from internal and external military threats. This was a significant initiative in which the center served as a sheltered workshop for soldiers with severe TBI.

At Tel Aviv University, a public university located in Tel Aviv, a neuropsychological unit for treatment and research was established. This unit was a result of the collaboration between the Rusk Institute of Rehabilitation Medicine at the NYU Medical Center and the Rehabilitation Department of the Israel Defense Ministry. More specifically, the unit was supported by a research endowment that was meant to test the efficacy of neuropsychological and cognitive treatments for people who had sustained brain injuries (Ben-Yishay et al., 1978). In addition to these new developments, the Loewenstein Rehabilitation Center, a small rehabilitation facility for chronic and elderly patients at the time, became involved in TBI rehabilitation as well.

The development of neuropsychological rehabilitation services in Israel was greatly enhanced in the aftermath of the Yom Kippur War in 1973. The Ministry of Health chose the Loewenstein Rehabilitation Center to be the national hospitalization center for people suffering from acquired brain damage as a result of cerebrovascular accidents (CVA), trauma,

and other diseases of the nervous system (Stern, 1991). The center significantly extended its facilities at that time. It is currently the largest rehabilitation center in the Middle East and has treated over 100,000 patients. Neuropsychological assessments and treatments for those suffering from chronic brain trauma are just a few of the many areas in which the hospital excels. Today, this center provides remarkable treatment, at any one time, for over 300 hospitalized patients suffering from CVA, TBI, other degenerative diseases, and spinal cord injuries.

The collaboration described above between the Rusk Institute of Rehabilitation Medicine at the NYU Medical Center and Israel's Defense Ministry Rehabilitation Department greatly intensified and eventually developed into the National Institute for Rehabilitation of the Brain-Injured (Hoofien, Becker, & Vakil, 1991). The National Institute eventually ended its partnership with the Rusk Institute and became an independent, civilian, non-profit, non-governmental organization (NGO). Currently, the institute provides nationwide neuropsychological rehabilitation services for some 250 people who suffer from acquired brain injuries every year.

As clinical neuropsychology became more popular, the number of clients at the Rehabilitation Center for the Brain-Injured in Jaffa steadily increased. The center currently treats approximately 50 disabled IDF (Israel Defense Forces) veterans who unfortunately suffer from severe brain injuries. The great surge of neuropsychological rehabilitation centers during those years affected the private sector as well. One example is a group of clinical neuropsychologists who set up a relatively large private clinic for neuropsychological rehabilitation of those suffering from brain trauma in the early 1980s (Gross, Klag, Ben-Nachom, Moed, & Fishaman, 1991).

Due to the growing demand for neuropsychological professionals, Ph.D.s graduates from the US and Canada began to flock to Israel. They laid the foundations for enhanced public services in the field and the beginning of academic training programs in neuropsychology at Ben-Gurion University in the Negev, Bar Ilan University in Ramat Gan, and at Hebrew University in Jerusalem.

One of the pioneering neuropsychologists in Israel was the late professor Levy Rachmani (1928–2014). Professor Rachmani earned his Ph.D. in neuropsychology in Boston from Northeastern University in 1975. He was the chief psychologist at the Loewenstein Rehabilitation Center for almost 20 years (1980–1997). During that period, before the establishment of formal neuropsychology programs in Israel, he trained generations of psychologists in neuropsychological assessment and clinical neuropsychology. In addition, he published the first books on neuropsychology in Hebrew: 'Brain and learning: Processes and impairments' (1983) and 'Introduction to clinical neuropsychology' (1984).



Accreditation, education, and internship requirements to become a clinical neuropsychologist

Accreditation

The Israeli Psychology Law of 1977 defined specializations in rehabilitation psychology. Clinical neuropsychology is included as a subspecialization within rehabilitation psychology. According to Ministry of Health publications, as of 2013 there are approximately 6,000 accredited specialists in Israel in the five treatment specializations: clinical (56%), educational (48%), medical, rehabilitation, and developmental (less than 5% each). Note that these figures add up to more than 100% because many psychologists specialize in more than one field.¹

The title *psychologist* is a protected title for graduates of master's programs at psychology departments in one of the accredited universities or colleges in Israel, and who are listed in the national Psychologists Registry. According to Ministry of Health publications, as of 2013 there are about 11,000 registered psychologists in Israel (of which 6,000 are specialists, as noted above). The additional 5,000 registered psychologists have not yet completed their internships or have graduated from non-clinical programs, (e.g. experimental psychology). The Psychology Law recognizes two levels of specializations: Specialist and Supervisor. The titles: 'Specialist' and 'Supervisor' in rehabilitation psychology or in clinical psychology are also protected titles for psychologists who completed their internship in rehabilitation or clinical psychology, respectively. Neuropsychology is not defined as a unique specialization by the Israeli Psychology Law and as such, it is not a protected title. Most of the clinical neuropsychologists in Israel graduated from either rehabilitation or clinical programs (92%, according to our survey). Less than 5% of the psychologists who practice clinical neuropsychology received their Ph.D. in clinical neuropsychology in the US. Among the clinical neuropsychologists who participated in our survey, 77% hold an M.A. degree, 23% have a Ph.D.

According to Ministry of Health regulations, once a psychologist is certified he or she may add a second line to their title to indicate a specific specialization that is not defined by law, such as Clinical Neuropsychology. Such addition to the professional title requires formal academic education in clinical neuropsychology.

The only legitimate certification is that awarded by the national Psychology Council of the Ministry of Health. The Psychology Council nominates professional committees comprised of 5–7 persons at Supervisor level in their respective fields for each of the five recognized specializations. These committees serve as the regulation authority on all internship procedures, including admittance of new candidates, follow-up during internship, and certifying specialists and supervisors. An intern who has fulfilled all of the internship requirements will apply to the committee and be examined by an ad hoc examination committee. The format of the certification examination varies between different specializations, as will be explained below.

As Israel is a relatively small country, it was concluded that an additional, formal specialization in clinical neuropsychology should not be offered. Furthermore, the vast majority of

1. In an attempt to provide updated information about the current status of neuropsychology in Israel, we conducted three ad hoc surveys. The first one was sent to all rehabilitation psychologists including trainees and senior psychologists. We received responses from 121 persons (93 M.A., 21 Ph.D. and 9 professors). The second survey was sent to the five heads of the academic programs in which neuropsychology is studied (Ariel University, Bar-Ilan University, Hebrew University, Haifa University, and the Academic College of Tel Aviv-Jaffa). Third, a survey was sent to the seven heads of accredited services which include neuropsychological rehabilitation (4 hospital rehabilitation departments, 1 NGO and 2 private rehabilitation services). The responses to the surveys are integrated in the following sections

neuropsychologists would most likely be affiliated with rehabilitation psychology as this is the major occupation of neuropsychologists in Israel. As a result, clinical neuropsychology is now practiced in Israel, by about 120 specialists (not including interns), under the official title of rehabilitation psychology or clinical psychology.

By law, accreditation as a specialist in rehabilitation or clinical psychology requires an M.A. degree as well as two full-time (or four half-time) years of supervised internship in a licensed institution, hospital, or clinic. Thus, it takes a total of eight to ten years of academic education and internships to be a certified as a Specialist in rehabilitation psychology. This includes a three-year B.A. program, a three-year M.A. program, and two-year (full-time) or four-year (part-time) internships. Accreditation as a Supervisor requires at least three consecutive years of practice in a rehabilitation/neuropsychology accredited facility and an additional two years of internship as a supervisor (under supervision).

Education and internship

Graduate studies in Israel entail between 40 and 55 academic points (a 90-min lecture for one semester with 12–14 sessions, constitutes two points), over the course of two to three years. According to accreditation regulations defined by the Psychology Law, the core obligatory courses in rehabilitation psychology are Introduction to rehabilitation psychology; Advanced statistics and methodology; The psychology of coping with disability; Advanced psychopathology; Theories and methods of psychotherapy; Psychodiagnosis; Ethical aspects in psychology; Supervision seminar. With the exception of the first course which is given for one semester, all of the courses are given for two semesters. In addition, all students are required to complete a pre-practicum during their first year for one day a week, and an additional practicum during their second year, for two days a week. The practicum takes place in accredited facilities such as hospitals or rehabilitation centers, and the pre-practicum may take place at a university clinic as well. During the practicum, a student will see between five and six patients and conduct between three and four neuropsychological assessments, including writing reports. In addition to these basic mandatory courses, each program adds several courses in basic and clinical neuropsychology (e.g. Neuropathology, Introduction to neuropsychological rehabilitation, Neuropsychological assessment, Neuroanatomy).

The education program is accredited by the Psychology Council of the Ministry of Health, according to the Psychology Law. Neuropsychology training is acquired in graduate studies at the master's level primarily in rehabilitation (85% of the clinical neuropsychologists) but also in clinical psychology. Currently, there are five graduate programs that offer Rehabilitation Psychology and/or Clinical Neuropsychology programs: Ariel University, Bar-Ilan University, Hebrew University, Haifa University, and the Academic College of Tel Aviv-Jaffa.

M.A. tuition is typically privately covered by the students as there is no institutional or governmental support for this degree. However, at the Ph.D. level there are several support options. One is to apply for competitive stipends offered by the university to outstanding candidates. Another alternative is to request a stipend from the grant money of the researcher supervising the dissertation. Together, these will usually cover at least half of the tuition and modest living expenses, but there are still Ph.D. students that require private financial support or must work for a living while going to school. Tuition for a single academic year in a public university or college is about 3,500 US\$. The public academic institutions in Israel are heavily

subsidized by governmental funds. In private institutions (only small colleges), annual tuition may reach 11,000 US\$.

Approximately 75 new students are admitted to rehabilitation psychology programs each year. However, there is a wide range in the number of students (8–21) admitted to each program and the sizes of classes vary accordingly. Clinically oriented classes are typically smaller, and range from six to eight students. Over 50% of rehabilitation psychology students complete their practicum requirements in a neuropsychological setting. Doctoral programs are predominantly research-oriented and do not include clinical courses.

Students have formal and informal means of expressing their level of satisfaction with their educational experience. The formal way is an annual anonymous survey in which students evaluate their various courses in terms of the content of the material learned and teaching quality. In addition, most institutions encourage open discussions between the students and the program director in which students can present their questions and complaints regarding the program in general, or regarding specific courses.

As described above, pre-practicum (first year) and practicum (second year) requirements are embedded in the M.A. program. Following graduation, the two-year full-time (or four-year part-time) internship includes therapy as well as psychological or neuropsychological assessments, under the supervision of a senior psychologist. Some 85% of all neuropsychology internships are at least partly completed in institutions or departments with neuropsychological orientations.

From the content perspective, there is no real difference between the practicum period and internship (except of course for level of clinical responsibilities as a function of accumulated experience). There are no specific demands for internship in clinical neuropsychology as these are embedded in the regulations for either rehabilitation or clinical psychology. According to the internship regulations, by the end of the internship the intern is expected to achieve a deep mastery in at least one therapeutic approach (e.g. psychodynamic psychotherapy, CBT), and at least partial familiarity with an additional approach. The intern is expected to entail full mastery in psychodiagnostics (including neuropsychological evaluations) and psychopathology, including DSM-V or ICD-10 diagnoses. In order to fulfill these requirements, the intern is expected to demonstrate full command of clinical interviewing, delivering of intelligence, personality (including projective tests) and neuropsychological test batteries, their scoring, interpretation, and reporting. A complete understanding of local rehabilitation and relevant legal systems is also required, as well as knowledge of the relevant ethical regulations. Internship in rehabilitation psychology in order to become a specialist must include clinical work with two different disability-populations, as defined by age or pathology (e.g. children or adult patients following traumatic brain injury, developmental disorder or dementia). An additional requirement is that the internship is done in two different accredited facilities (e.g. hospital, rehabilitation center) for at least one year in each. Within these facilities, several clinical experiences are required. One is assessment and evaluation (full batteries): thirty cases or 20 comprehensive neuropsychological evaluations, supervised by two certified supervisors on an individual basis. Our survey participants reported of an average of approximately nine full neuropsychological evaluations per year (in half-time positions). The second requirement is psychotherapy or counseling: 200 h of individual supervision by two certified supervisors. Group supervision is approved for a maximum of 50% of the total supervision time required. Our participants reported treating an average of 20 patients per year. At the end of the internship, the candidate must pass an

accreditation examination. For rehabilitation psychologists, the examination includes a detailed written case-report and an assessment report, followed by an oral examination conducted by a committee of three senior psychologists at supervisor level. Some 25% of the examinees fail the first examination and are eligible for further attempts, with an interval of at least six months between examinations.

Internship is not allowed on a voluntary basis (in order to avoid exploitation of interns). Therefore, the Ministry of Health allocates stipends for half-time internship positions. The stipend is about 1,000 US\$ (gross, including taxes and social benefits) per month for four years. By Israeli standards, this is a relatively low salary. Internship could be completed in two years if the employer is interested in employing the intern and offering a full-time position. It is important to note that there might be a waiting list for stipends from the Ministry of Health.

As mentioned above, the psychology law in Israel recognizes two levels of specializations: Specialist and Supervisor. Accreditation as a Supervisor in rehabilitation psychology has several requirements. The prerequisite is three years of experience as a specialist in an accredited institution. In addition, it requires an additional two-year internship in which the candidate supervises at least two interns, each for at least one year and for 150 h or more. This supervision process is overseen by two Supervisors, for at least 80 h, during two years. The majority of the supervisors in our survey reported supervising an average of 10 interns at a time. It should be noted that what has been described above is the accreditation process for rehabilitation psychology. The accreditation process for clinical psychology is similar but there are some differences.

Training facilities for both specialists and supervisors are accredited by the Psychology Council of the Ministry of Health. Currently, there are 33 accredited sites, of which 15 are hospital departments and the rest are either NGOs or private institutions. As mentioned above, the minimum requirement during the half-time four-year internship is between 20 and 24 h/week. Most of the trainees also work other jobs that are not necessarily related to psychology. Internship for Supervisor certification is most commonly a full-time or 75% position. Among the psychologists who participated in the survey, 35% work full-time, 14% work a three-quarter position, 20% work half-time, and the rest work less than that. In other words, 75% of supervisor trainees work between half-time and full-time positions, and 25% work less than half-time.

Practicing clinical neuropsychology

As reported above, there are a total of about 11,000 registered psychologists in Israel. Some 6,000 of these are specialists or supervisors, of which less than 5% specialize in rehabilitation psychology (including retirees and those who are not working in the field). Ninety-two percent graduated from rehabilitation or neuropsychology programs. According to our survey, about 75% of the neuropsychologists in Israel work between half- and full-time positions in hospitals, primarily in rehabilitation departments, or NGOs and publically funded institutions, either in-patient or out-patient wards. In these cases, their employers are either the Ministry of Health, which in Israel is the owner of about 50% of the entire medical system, or one of the Health Insurance organizations which own the other 50% of the system. Out of the 121 neuropsychologists (including interns) who responded to our survey, 52% were interns, 24% specialists, 22% supervisors, and two researchers at the academia with no clinical

background. About 70% of those who responded view themselves primarily as clinicians, 25% combine research with clinical work, and about 5% are primarily researchers. In their clinical work, 77% combine therapy and assessment, 15% primarily therapy, and only 8% are primarily involved in assessment. The majority (71%) work primarily with adults, about 26% work with children and less than 3% work with the elderly population.

Since most of the adults seeking rehabilitation are insured by law either when injured at work, involved in car accidents or injured in the army, they would be referred to public facilities for rehabilitation. This leaves fewer opportunities for private services to prosper, though they do exist. Nevertheless, 7% of the participants in our survey stated that they work full-time in a private practice and an additional 20% work part-time in a private practice. However, there are more opportunities for neuropsychological assessments primarily for forensic purposes. Seventy-five percent of our survey participants reported being employed by public or state institutions in at least half-time positions. Forty-eight percent hold private practices (mostly in addition to their public positions), and only 25% are at least partly involved in the academia (of which only 7% are full faculty members).

The gross salary of an intern is about 1,200 US\$ per month for a half-time position. The estimated gross salary of a junior certified psychology is about 2,000 US\$ per month for a full-time position. Gross salary of a senior psychologist is about 3,800 US\$ per month. The fee for private consultations ranges from 70 to 120 US\$ per hour. The fee for neuropsychological evaluations is about 1,500 US\$ or 100 US\$ per hour.

As mentioned above, the evolution and current state of clinical neuropsychology in Israel is strongly associated with that of rehabilitation psychology. In both education and practice, the two specializations determine the actual professional activities. As such, clinical neuropsychologists are involved in case management, psychotherapy (both dynamic and behavior-oriented), cognitive training, family counseling, and of course – neuropsychological evaluation.

In medical rehabilitation departments and some out-patient institutions, neuropsychologists work closely with other rehabilitation professionals (e.g. physiatrists, neurologists, neurosurgeons, psychiatrists, social workers, occupational therapists and speech pathologists). There is some overlap and thus also competition with occupational therapy with regard to cognitive evaluation and cognitive training. Taking into account that occupational therapy in Israel is recognized as a profession at the undergraduate level, compared to psychology which requires an M.A. degree, downgrading the cost of services becomes a possibility. In general, occupational therapists conduct neuropsychological evaluations and interventions at the acute phase in order to set cognitive remediation goals for patients. Neuropsychologists on the other hand would be contacted for neuropsychological evaluation and intervention at the post-acute and chronic phases of rehabilitation, either for forensic or vocational planning purposes.

Future directions and challenges

We have good reason to believe that compared to neuropsychologists in other western countries, Israeli neuropsychologists are more deeply involved in case management, including vocational counseling and rehabilitation psychotherapy. They are much less involved in forensic neuropsychology and evaluations for litigation purposes. By and large, the main feature of clinical neuropsychology in Israel is its embeddedness in rehabilitation. We have

learned that with proper education and extensive supervised internship, clinical neuropsychologists may play a very central and significant role in case-management of patients in in-patient and out-patient rehabilitation settings. This is especially true for several community-based neuropsychological rehabilitation units and institutions (public and private) in which neuropsychology is the dominant area of expertise.

There are several important needs of neuropsychologists in Israel.

- (1) There is an enormous lack of locally standardized and normalized neuropsychological tests. This is true for both the Hebrew and Arabic languages. Most of the batteries and tests used (e.g. WAIS-IV, WMS-IV) are direct translations of the English versions with no cross translation, standardizations or local norms collection. However, several published neuropsychological tests have been translated into Hebrew and do have local norms:
 - (a) Rey – Auditory Verbal Learning Test (AVLT) (Vakil & Blachstein, 1997; Vakil, Blachstein, & Sheinman, 1998).
 - (b) Phonemic fluency, semantic fluency (Kavé, 2005).
 - (c) Delis–Kaplan Executive Function System Sorting Test (D–KEFS) (Heled, Hoofien, Margalit, Natovich, & Agranov, 2012).
 - (d) Patient Competency Rating Scale (PCRS) (Hoofien & Sharoni, 2006).
 - (e) Word Memory Test (WMT) (Hegedish & Hoofien, 2013).
 - (f) Executive Abilities: Measures and Instruments for Neurobehavioral Evaluation and Research (EXAMINER) (Hoofien & Vakil, in progress).
- (2) Because of the geopolitical situation and the socialistic characteristics of Israel's national policies, there is a long-standing tradition of rehabilitation programs particularly for patients following TBI (see review paper of 20 years perspective by Vakil, 1994). The effectiveness of some of these programs as a whole has been demonstrated in terms of improving outcome, particularly as reflected by return to work (Hoofien, 2012). However, the effectiveness of specific cognitive interventions, (e.g. Gross & Schutz, 1986; Hoofien, 1987; Vakil & Sheleff, 1990) is not yet evidence-based. Thus, an effort should be made to study the efficacy of various intervention procedures, cognitive as well as emotional, and make them evidence-based.
- (3) Legal recognition of clinical neuropsychology as a subspecialization within rehabilitation and clinical psychology, thus making Clinical Psychologist a reserved title. This is necessary in order to avoid misuse of this title by psychologists who have not acquired proper training and education at the graduate level in neuropsychology.
- (4) Like the entire psychological profession in Israel, there are no formal requirements for continued education in order to maintain the Specialist or Supervisor title in psychology. Thus, senior professionals in the field are not well updated on new theoretical, research, and clinical developments. Only very few, particularly those who are affiliated with an academic institution and research, are well informed. Furthermore, the geographical distance from other western countries and costs of travel prevent the average Israeli professional from participating in international scientific meetings and conferences. Our survey found that only 15% of the participants are members of international neuropsychological societies such as the International Neuropsychological Society (INS). About half of the participants stated that they attend at least one scientific meeting a year and read 1–2

professional scientific papers per month. In an effort to address this issue, the Israeli Neuropsychological Society organizes an annual one-day conference, hosted in rotation by the local universities or colleges. In this context, it is important to note that the annual conference of the INS in 2014 took place in Jerusalem, Israel.

- (5) **Income** – With an average salary of about 3,000 US\$ per month and the extremely high costs of living in Israel, a full-time position as a medium-level neuropsychologist is far from enough to support an average family. Hence, many neuropsychologists hold more than one full-time position in order to maintain a reasonable standard of living. By Israeli standards, the salary of a medium-level specialist in neuropsychology is equal or lower than that of an elementary school teacher with an undergraduate education. Thus, an improved salary is needed in order to attract high-quality students and eventually enable an adequate and reasonable work atmosphere for neuropsychologists in Israel.
- (6) The population of Israel is currently over eight million and is comprised of at least nine different ethnical groups. Approximately 80% of the population consist of Jews belonging to one of five groups: Sephardic, Ashkenazi, Russians, Ethiopians, and ultra-orthodox Jews; and 20% are Arabs – Muslims, Christians, Druze, and Cherkesians. Three languages are officially recognized by law: Hebrew, Arabic, and English. In addition, Russian and Amharic are also commonly spoken. In contrast to this diversity, most of the psychology students, and particularly those specializing in neuropsychology, are of Jewish Sephardic or Ashkenazi origin, with excellent command of Hebrew and a reasonable command of English. Arabic- and Russian-speaking neuropsychologists are very rare, and none have adequate command of Amharic. It is important to note that all academic institutions attempt to encourage and facilitate the admittance process of students from minority sectors. Thus, neuropsychologists in Israel must constantly cope with cultural, mentality and ethnical differences, be well educated on the diversity of attitudes and life-philosophies, and adjust their arsenal of interventions and evaluations to the demands set by these different groups.

Disclosure statement

No potential conflict of interest was reported by the authors.

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