

Psychological Assessment Center

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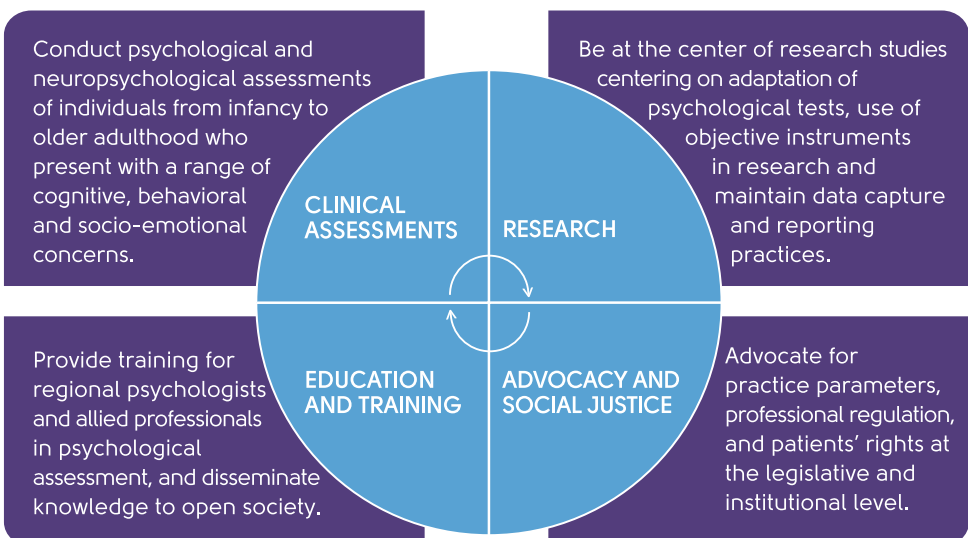
About the PAC

The Psychological Assessment Center (PAC), housed within the Department of Psychiatry at the American University of Beirut Medical Center (AUBMC), provides services in psychological and neuropsychological assessments spanning clinical, educational, research and social avenues.

In 2012, the PAC launched a training affiliation with the Baltimore-based Kennedy Krieger Institute (KKI) at the Johns Hopkins University School of Medicine. The KKI, and specifically its neuropsychology department, serve as a model of practice throughout the United States in their approach to diagnosing and treating complex neurological and neurodevelopmental disorders. Being the first regional center to launch such an affiliation, the PAC provides clinical services that are internationally recognized and evidence-based, to children and adults with neurodevelopmental, acquired brain-related disorders, medical, psychological and educational issues.

The PAC houses the largest library of up-to-date tests in English, Arabic, and French. Instruments are utilized clinically within PAC, made available to trained researchers throughout AUBMC, and are also used for clinical training of psychology interns.

Mission of PAC



Core Staff



**PIA ZEINOUN,
PhD, LCPC**

**Managing Director
Assistant Professor of Psychology**

Dr. Zeinoun is the co-founder and Managing Director of the Center, and an Assistant Professor of Psychology at the Department of Psychology. Clinically, Dr. Zeinoun specializes in the evaluation and treatment of patients with neurodevelopmental and psychiatric disorders. Her research centers on the construction of tests for Arabic populations to produce testing practices that are culturally-relevant and valid, in the measurement of personality, psychopathology in children/adolescents, and neuropsychological functions. She has 10 years of clinical experience in assessments, and her background includes graduate training in neuropsychological assessment of children at the Johns Hopkins/Kennedy Krieger Institute in Maryland, USA, in addition to her licensure as a clinical counselor in the state of Illinois. Dr. Zeinoun has a PhD in Psychology from Tilburg University in the Netherlands, and a Master's degree in Clinical & Counseling Psychology. She is a full member of the American Psychological Association (APA) and the International Test Commission (ITC).

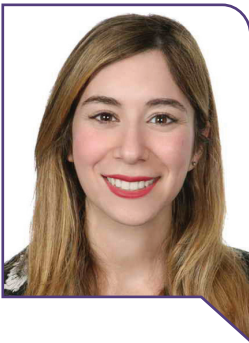


**MARYSE MAROUN,
MSc, PHD CANDIDATE**

Clinical Neuropsychologist

Ms. Maroun is a neuropsychologist who specializes in the assessment of children with neurodevelopmental disorders, and a former language pathologist with an extensive experience in cognitive and language rehabilitation. Ms. Maroun completed a post-graduate residency in neuropsychological assessment at the Kennedy Krieger Institute. She received a master's degree in Clinical Neuropsychology from the University of Angers in France and a bachelor's degree in Communication Disorders from Saint-

Joseph University in Beirut. Ms. Maroun holds memberships in the International Neuropsychological Society (INS), and she was previously the vice-president of the Lebanese Speech and Hearing Association (ALO). Ms. Maroun is currently conducting doctoral research in Psychology at the University Of Essex in the United Kingdom where she is investigating the neurocognitive aspects of reading in Arabic.



CYNTHIA ROUKOZ,
MSc, MA, PhD CANDIDATE

Clinical Neuropsychologist

Ms. Roukoz is a clinical psychologist who specializes in neuropsychology, and she has joined the PAC in 2016. Ms. Roukoz holds a master's degree in Clinical Neuropsychology from the University of Angers in France, following a Bachelor's degree and Master's degree in Clinical Psychology from Saint-Joseph's University. Ms. Roukoz has completed internships at various institutes in France and at the Johns Hopkins/Kennedy Krieger Institute in Maryland, USA where she further specialized in the assessment of children with acquired and developmental conditions such as epilepsy, traumatic brain injury, intellectual disabilities, and congenital disorders. Her clinical practice also covers the evaluation of older adults with neurodegenerative conditions. Her doctoral research focuses on the cognitive sequela of children with epilepsy and on developing culturally appropriate tests in Arabic. Ms. Roukoz is a member of the International Neuropsychological Society.



RASHA MASHMOUSHI,
DEdPsy

Educational Psychologist

Dr. Mashmoushi is an educational psychologist specializing in clinical evaluations and treatment of neurodevelopmental disabilities, particularly in schools and college settings. Dr. Mashmoushi has a Master's degree in Educational Psychology from the University of Bristol, UK and a Doctorate degree in Applied Educational Psychology from the University of Nottingham, UK. She has joined the PAC in 2017, following various appointments at universities and clinics in the UK, KSA,

UAE and Lebanon, amassing more than 7 years of international experience in assessments and interventions. Her research focuses on improving practices in schools and universities to meet the needs of individuals with neurodevelopmental disorders. Dr. Mashmoushi is a member of the British Psychological Society.



**RAMA KANJ,
TD, MA CANDIDATE**

Psychometrist

Ms. Rama Kanj is an MA candidate in Educational Psychology at the American University of Beirut specializing in Tests and Measurements. Ms. Rama earned a Bachelor of Arts in Psychology from AUB in 2014 and a Teaching Diploma in Special Education in 2015 where she received the award of Excellence in Practice Teaching for the year 2014-2015. She joined the PAC at AUBMC in 2016 as a psychometrist where she administers and scores psycho-educational and neuropsychological tests. Her research interests center on cultural adaptation of psycho-educational assessment tools and the development of Lebanese norms for commonly used Western tests and procedures.

Clinical Services

What is an evaluation?

A psychological/neuropsychological evaluation refers to the formal process of systematically measuring a sample of cognitive functions and behaviors in order to answer key questions about a person's functioning and aid in making diagnostic, rehabilitative, educational, and treatment-relevant decisions.

This center offers comprehensive psychological and neuropsychological evaluations for infants, children, adolescents, adults, and older adults presenting with a spectrum of psychological and medical conditions that might be impacting their cognition and behavior.

How is the evaluation conducted?

The evaluation process involves meeting with the patient and/or family over an extensive outpatient visit. The evaluation consists of several steps that include:

1. Referral

- Referral by a clinician.
- Triage by the Department of Psychiatry.

2. Interview

- Interview with the patient and/or his/her family that centers around current concerns and history.

3. Standardized Procedures

- Administration of standardized procedures such as tests, rating scales, and extended observations, which typically takes 1 to 5 hours.
- Tests are conducted in a one-to-one format with the patient and involve familiar activities such as puzzles and questions.

4. Diagnosis and Recommendations

- A post-evaluation session is held with the patient and/ or the patient's family to explain results, provide helpful diagnoses, and set a plan for interventions and treatment.
- A written report of the evaluation is provided within 3 weeks.

When is an evaluation helpful?

Patients often request an evaluation themselves, or are referred by their schools, neurologists, psychiatrists, psychotherapists, speech/language therapists, occupational therapists, primary physicians, and others. The evaluation is conducted in order to:

- Improve diagnostic accuracy
- Characterize a cognitive profile of strengths and weaknesses
- Establish a baseline of cognitive functioning
- Objectively measure cognitive change across time
- Measure response to surgical, pharmacological, psychological, or other interventions
- Plan treatments that accommodate functional deficits

The below table identifies how psychological/neuropsychological evaluations are applied to a variety of patient conditions.

Condition	Application of evaluation
Neurodevelopmental disorders	<ul style="list-style-type: none"> • Patients include children and adults with intellectual disabilities, learning disabilities, attention deficit and hyperactivity disorder, and autism spectrum disorders, referred from multiple settings and clinicians such as psychiatrists, pediatricians, psychotherapists, and school settings. • Evaluations establish diagnosis, identify intellectual strengths and weaknesses, and aid in devising home-based and school-based interventions.
Neurocognitive disorders: Mild cognitive impairment and dementias	<ul style="list-style-type: none"> • Differentiate between normal aging, depression, mild cognitive impairment, and various dementia subtypes. • Repeated measure detect change in cognitive function across time and response to medication.
Stroke and vascular disorders	<ul style="list-style-type: none"> • Yield a detailed profile of cognitive and functional abilities to guide interventions and rehabilitation.
Traumatic brain injury	<ul style="list-style-type: none"> • Predict the functional status of the patient after the injury. • Guide rehabilitation by clarifying the pattern of cognitive strengths and weaknesses.

Condition	Application of evaluation
Epilepsy	<ul style="list-style-type: none"> • Predict the cognitive consequences of surgery, and map the location of cognitive functions in the brain. • Measure post-surgical cognitive and functional outcomes. • Inform medication management by measuring the cognitive effects of medications.
Parkinson's disease	<ul style="list-style-type: none"> • Predict and measure post-surgical cognitive outcomes of deep brain stimulation. • Define the neuropsychological strengths and weaknesses of patients.
Brain tumors	<ul style="list-style-type: none"> • Identify cognitive baseline and cognitive outcomes related to tumor resection and immediate and late-effects of radiation and chemotherapy.
Other central nervous system disorders	<ul style="list-style-type: none"> • Detect cognitive impairment and guide treatment in other central nervous system disorders such as multiple sclerosis, Huntington disease, hydrocephalus, and intracranial aneurysms.
Psychiatric disorders	<ul style="list-style-type: none"> • Aid in diagnosis and treatment-planning of psychiatric disorders. • Evaluate the nature and severity of cognitive dysfunction, especially when a decision has to be made for the patient's independent living.
Non-central nervous system medical conditions	<ul style="list-style-type: none"> • An assessment is useful in many non-central nervous system conditions, including acute respiratory distress syndrome, cancer, chronic kidney disease, chronic obstructive pulmonary disease, cardiac disorders, hypertension, obesity, obstructive sleep apnea, and type II diabetes. • It detects the presence, nature, and severity of brain dysfunction, and helps guide clinical management and rehabilitation to improve several aspects of daily functioning.

Educational and Training Services

Part of PAC's mission is to provide AUBMC and the community with educational and training services. PAC trains interns and students, conducts lectures and presentation to students and professionals in AUB and the community at large, and acts as a link for continuing education resources with the Kennedy Krieger Institute in Maryland. Additionally, PAC trains relevant clinical and research staff at AUBMC in the use of instruments and tests.

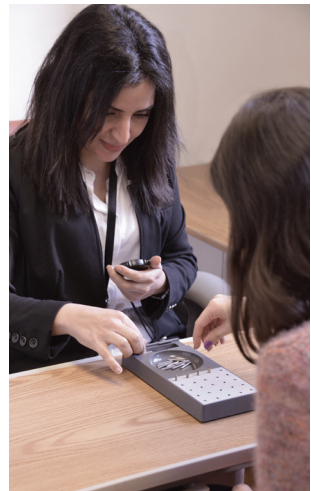
Research

As psychology, behavioral science, and neuropsychology continue to be emerging fields in the Arab region, the psychometric measurement tools that underpin these disciplines continue to be imported from developed countries into the Arabic language and population. However, the blind application of psychological tools from one culture and language to another results in biased measurements which in turn may lead to false conclusions in research and clinical practice. For these reasons, PAC supports research efforts that center on the development of culturally applicable and psychometrically-sound tools. The core PAC staff is involved in ongoing adaptation and validation of psychiatric scales, personality tests, structured interviews, cognitive screeners, and memory tests.

Additionally, as research becomes more trans-disciplinarian, an increasing number of studies in neuroscience, pediatrics, OB/GYN, public health, nutrition, and family medicine, are incorporating psychological outcome measures in their procedures. In response PAC offers its library of tests, resources, and expertise to support the use of standardized and culturally appropriate psychological tools in research.

Largest Library of up-to-date tests in the region

- Wechsler Intelligence Scale for Children (WISC-IV & V), Wechsler Adult Intelligence Scale (WAIS-IV), Wechsler Preschool and Primary Scale of Intelligence (WPPSI-IV), Test of Nonverbal Intelligence (TONI-3), Kaufman Assessment Battery for Children (K-ABC), Woodcock Johns Tests of Cognitive Abilities and Achievement III (WJ-IV), Differential Abilities Test (DAS-II), (and others).
- Repeatable Battery for the Assessment of Neuropsychological Status (R-BANS), NEPSY II, NAB.
- Test of Variables of Attention (TOVA-8), Test of Evaluation of Attention (TEA & TEA-CH).
- Delis-Kaplan Executive Function System (D-KEFS), Wisconsin Card Sorting Test (WCST), Behavioral Assessment for Dysexecutive Syndrome (BADS/C).
- Wide Range Assessment of Memory and Learning (WRAML-2), Wechsler Memory Scales (WMS-IV), California Verbal Learning Test (CVLT/C).
- Receptive/Expressive One-Word Picture Vocabulary Tests (EOWPVT-IV), Token, Boston Diagnostic Aphasia Examination (BDAE-3).
- Beery VMI, Rey Complex Figure and Recognition, Symbol Digit Modality (SDM).
- Grooved Pegboard, Dean Woodcock Sensorymotor Batter (D-WSB).
- Vineland II, ADL, Adaptive Behavior Assessment System (ABAS-II).
- Minnesota Multiphasic Personality Inventory (MMPI-2), Children's Apperception Test (CAT).
- Autism Diagnostic Observation Schedule (ADOS-1,2,3,4), Autism Diagnostic Interview (ADI-R).



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Psychological Assessment Center

American University of Beirut Medical Center

Notes

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