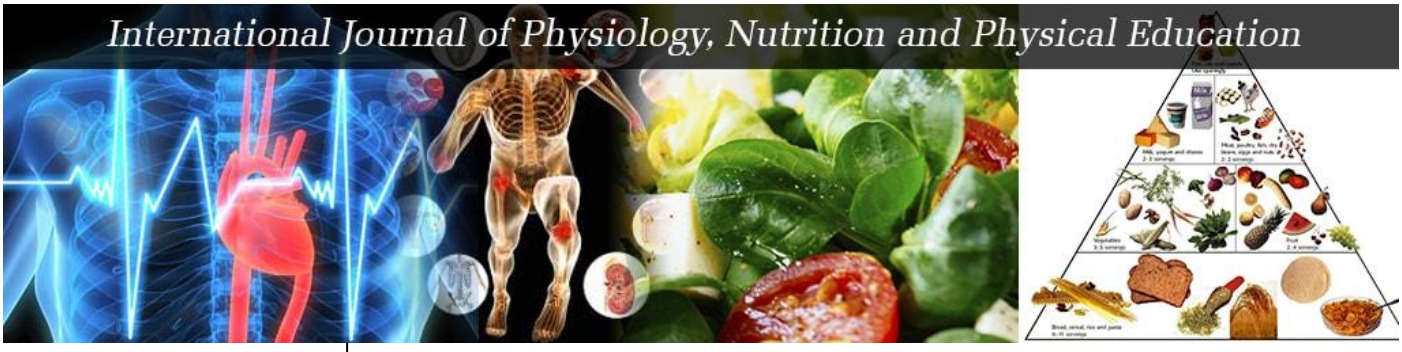

ISSN: 2456-0057
IJPNPE 2018; 3(1): 809-811

www.journalofsports.com
Received: xx-11-2017
Accepted: xx-12-2017

Mallikarjun C Pujari
Assistant Professor of Physical Education, (Contractual) College of Forestry, Sirsi, Karnataka, India

Vijay kumar SD
Guest Lecturer, Govt, First, Grade Degree College, Jewargi, Karnataka, India

Correspondence
Mallikarjun C Pujari
Assistant Professor of Physical Education, (Contractual) College of Forestry, Sirsi, Karnataka, India

Neurological and mental disorders

Mallikarjun C Pujari, Vijay kumar SD

Abstract
Over the last decade and a half, reinforcement learning models have fostered an increasingly sophisticated understanding of the functions of dopamine and corticoid-basal ganglia-thalami-cortical (CBGTC) circuits. More recently, these models, and the insights that they afford, have started to be used to understand key aspects of several psychiatric and neurological disorders that involve disturbances of the dopaminergic system and CBGTC circuits. We review this approach and its existing and potential applications to Parkinson's disease, Torte's syndrome, attention-deficit/hyperactivity disorder, addiction, schizophrenia, and preclinical animal models used to screen novel antipsychotic drugs. The approach's proven explanatory and predictive power bodes well for the continued growth of computational psychiatry and computational neurology.

Keywords: Mental toughness, Competitive anxiety, High and low positions

Introduction
The limitations of the state-of-the-art in oncology in psychiatry have been much debated in the context of the development of the new edition of the Diagnostic and Statistical Manual of Mental Disorders. There is widespread agreement that the current symptom-based system of classification must eventually be replaced with a system based on path physiology. However, the current understanding of the neurobiology and genetics of psychiatric disorders remains too limited to form the backbone of nosology[1]. This limited understanding is also reflected in the state-of-the-art in treatment, with most psychiatric medications having been found by serendipity, rather than through rational design. Neurology typically deals with disorders with better understood etiology (e.g., loss of dopaminergic neurons in Parkinson's disease), but even then, it is often unclear how these etiological processes produce complex patterns of symptoms, and why treatments can alleviate some deficits while exacerbating, or even causing, others. Part of the problem is the complexity of the brain and mind, and the many levels of analysis that span the two. Computational models are a valuable tool to tame this complexity, because they foster a mechanistic understanding that can span multiple levels of analysis and that can explain how changes to one component of the system (e.g., increases in striate D2 receptor density) produce systems-level changes that translate to changes in behavior.

➢ What are the main signs and symptoms of dysphagia?
Dysphagia, or difficulty in swallowing, is a common problem in patients with neurological diseases, often resulting in aspiration pneumonia, compromised nutrient intake, dehydration and malnutrition.
The main signs and symptoms of dysphagia include:

- Excessive saliva excretion, choking and coughing during or after meals
- Poor control of tongue, excessive tongue movement and spitting food out of the mouth
- Inability to drink liquids through a straw
- Pocketing of food in cheek or under tongue
- Wet 'gurly' voice after eating or frequent throat clearing
- Delayed or absent laryngeal elevation
- Prolonged chewing or eating time
- Chronic or recurrent upper respiratory problems.

- **What are the main nutritional goals for the treatment of a dysphagic patient**

The main goals for the nutritional management of a dysphagic patient are:

- The determination of the safest route for the provision of food, to prevent aspiration and choking.
- The evaluation of the problem and the assessment of the texture of the foods that the patient can tolerate.
- The provision of sufficient energy and nutrient intake, to ensure the best possible nutritional status of the patient.
- The intake of sufficient liquid to prevent dehydration.

- **What are the characteristics of the dietary regimens for patients with dysphagia**

Dysphagia diets must be highly individualized, depending on the patient's chewing and swallowing ability. Foods' texture and viscosity may be altered in order to be tolerated. Fluids and liquids are categorized in four groups, progressing form the easiest to most difficult to swallow.

- **What are the main problems caused by the texture and density manipulation of foods for dysphagic patients**

Food items used in pure´ ed preparations should be thoroughly cooked. This causes the loss of a significant amount of their vitamin and mineral content and often the prescription of a multivitamin is necessary in order to ensure that the patient receives sufficient micronutrient intake. Moreover, constipation is very common among these patients, since texture manipulation through stirring and diluting the food items results in feeds relatively low in dietary fiber. Another problem that can also compromise the nutritional intake of dysphagic patients is the alteration in food appearance and smell following texture manipulation. The use of special equipment that can give special forms to the food and taste enhancers can be used in order to ensure food palatability and better patient compliance.

- **What are the etiology and main clinical symptoms of pernicious Anemia And What is its nutritional management**

Pernicious anemia was first described in 1948. It is a macrocytic, megaloblastic anemia, caused by B_{12} deficiency or by secondary vitamin deficiency due to a lack in the intrinsic factor, which is excreted in the stomach and is necessary for the absorption of B_{12}. The overt symptoms of pernicious anemia include par aesthesia, numbness and tingling of feet and hands, poor muscular coordination, poor memory and diminution of the sensation of vibration and position. Its treatment consists of intramuscular or subcutaneous injections of B_{12}. For the nutritional management of pernicious anemia, food items such as meat, eggs and dairy foods are considered rich sources of vitamin B_{12} and should be included in the diet plan of the patient to ensure the sufficient dietary intake of this vitamin.

- **What are the main nutritional neuropathies And How are they treated**

Nutritional neuropathies mainly affect the peripheral nervous system, and their symptoms include lean body mass depletion and progressive wasting. Early signs are anorexia, irritability, weight loss and abdominal discomfort, while in the long term paralysis, numbness and the disturbance of a patient's sense of hot and cold may be observed. The most common forms of nutritional neuropathies – beriberi and alcoholic neuropathy – can be attributed to thiamin deficiency, but other deficiencies in B-complex vitamins cannot be excluded. The nutritional management of these neuropathies is a balanced diet with supplementation of B-complex vitamins. Specifically in alcoholic neuropathy, thiamin supplements should be added, and abstinence from alcohol is essential for the recovery of the patient.

- **What are the nutritional needs of patients with a recent stroke? How may that stroke influence their nutritional status and their ability to feed themselves?**

When a patient with a recent stroke is being evaluated, it must be taken into account that:

- A brain injury due to a stroke results in a hyper catabolic state for patients, raising their energy and protein needs significantly. Moreover, as insulin resistance and electrolyte imbalances are rather common in these patients, they should also be co-estimated.
- A stroke can severely modify the ability of the patient to receive food without help.
- Malnutrition is common in patients with stroke, caused either by their increased nutritional needs or by their compromised nutritional intake, and can prolong the recovery or increase comorbidities, such as pressure ulcers and infections.

- **What nutritional problems are connected with multiple sclerosis**

One of the main problems associated with multiple sclerosis is malnutrition due to the loss of interest in, or inadequate consumption of, food. The etiology of malnutrition in these patients is

- psychological factors, e.g. anorexia or depression, as a result of the diagnosis
- side effects of the medical treatment
- fatigue and disability in preparing meals.

Apart from undernourishment, overweight and obesity due to limited physical exercise and increased appetite mainly due to corticosteroid therapy can also be observed in this population. Moreover, binge eating and bulimic episodes can be seen as a result of depression in these patients.

It is also noteworthy that constipation is a common symptom, resulting from reduced mobility and physical exercise,

restricted fluid intake due to problems in micturition or continence and reduced bowel movement due to the disease.

- **How can Parkinson's disease influence the nutritional status of the patient?**

Parkinson's disease frequently affects patients' nutritional intake. The symptoms of the disease can vary between patients and may worsen as the disease progresses.They can include:

- Tremor and rigidity, causing difficulties in preparing food and self-feeding
- Slow movement, resulting in extended meal duration
- Depression, limited appetite, apathy
- Drug side effects (nausea, vomiting, anorexia)
- Swallowing difficulties (dysphagia).

Patients with Parkinson's disease may also have increased energy requirements due to tremor and rigidity thus worsening the effects of an already inadequate intake.

Conclusions

RL models have been used to explain a wealth of findings across several psychiatric and neurological disorders. Although disorders as seemingly disparate as PD, TS, ADHD, schizophrenia, and addiction might seem to have little in common, they all involve disturbances in dopamine and CBGTC loops. The work reviewed above demonstrates that a mechanistic, computationally grounded understanding of the functions of these circuits sheds important light on all of these disorders. This approach relates to the new NIMH Research Domain Criteria (RDoC) initiative, which calls for research that cuts across diagnostic criteria and focuses instead on neurocognitive domains and how they go awry in a variety of DSM-defined conditions. The work reviewed above exemplifies this strategy. This work also amply demonstrates the new level of theoretical sophistication that computational psychiatry and computational neurology bring to the venerable disciplines of psychiatry and neurology. Such theoretical sophistication and depth is essential if we are to fulfill the promise of a neuroscience-based, mechanistically detailed approach to diagnosis and treatment, which many agree should characterize the psychiatry and neurology of the future.

References

1. Hyman SE. Can neuroscience be integrated into the DSM-V? Nat. Rev. Neurosci.
2. Kendell R, Jablensky A. Distinguishing between the validity and utility of psychiatric diagnoses. Am. J. Psychiatry.
3. Frank MJ, Samanta J, Moustafa AA, Sherman SJ. Hold your horses: impulsivity, deep brain stimulation, and medication in parkinsonism. Science.
4. Maia TV. Reinforcement learning, conditioning, and the brain: Successes and challenges. Cogn. Affect. Behav. Neurosci.