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Brain Ecology and PMLCP

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A long time ago, I realized that the work we do will eventually come together with neuroscience. But today I can finally participate in 2020WNPC online, and I still feel very nervous. Especially the lens will face the members of the organizing committee and colleagues in the neuroscience community.

Ladies and gentlemen Good evening!

When I saw the invitation email from Sylvia Morris, the manager of the 2020WNPC conference, I thought whether the email was sent wrong. First of all, I would like to thank the 2020WNPC Organizing Committee, it is a great honor to be selected for the conference and give a speech. Today is destined to be an unforgettable experience for me.

I would like to thank my recommender Sylvia Morris. As far as neuroscience is concerned, my work is cross-border, and because of the problem of oral English, I need to ask for an interpreter to communicate. Nevertheless, "Brain Ecology and PMLCP" is still accepted to give a speech, thank you for giving me too much tolerance.

The translator for me today is Dr. Yang Shanshan. She provided translation support for my video speech at the 23rd World Congress of Sexual Health in 2017. Thank her for her help again and make our communication possible.

I am from China and Wuhan. On January 23, 2020, I was "closed" due to the epidemic. However, this unexpectedly gave me a chunk of time. During these 76 days, we wrote a review article entitled "PMLCP, a Cognitive-Related Clinical Trial, and Its Research Ideas". After international peer review on June 26, this article was published in full in the journal Maternal and Child Health under the American scientific publisher. Mr. Sylvia Morris paid attention to us from this, and invited us to share relevant thoughts with you.

My wife Li Songlin is also online, she is my collaborator and the second author of this article. She and I are both studying at Huazhong Normal University, she is in the Department of Foreign Languages, and I am in the Department of Mathematics at the branch. After graduating from university and working separately, we met by introduction. Your meaning to me is beyond words, thank you for being a supporter and collaborator of my career, and a partner in my life.

PMLCP stands for "Perfect Menopause Leading Cognitive Project", which is different from projects that focus on finding protective factors. Based on the construction of a related theoretical framework, it seeks out risk factors and tries to verify its causality. So, how is our framework formed?

The 1970s was a special era in China. When I was 17 years old after graduating from junior high school, like most of my peers, I went to the countryside to study and exercise. After three and a half years of rural life, I have also developed the qualities of perseverance, diligence and independence. Because of my outstanding performance, I was very fortunate to be recommended to study in the Department of Mathematics. Of course, this is not my childhood dream of a doctor. Fortunately, I took the course of "Optimization Mathematical Methods" during the university, and participated in the project research of going to antibiotics companies, using these methods to help improve the potency of medicines.

My medical career began in the early 1980s. In 1988, with the support of my wife, I bid farewell to the teaching profession of "Advanced Mathematics" at the Railway Internal Combustion Engine Driver School for 11 years. Research Institute" independently developed skin preparations for clinical application and research of menopausal FSD. In 1991, it was presided over by the national science and technology department and appraised by a top expert group in China's skin industry, and its results "reached the domestic advanced level."

In 1992, Professor Wang Shufan, the director of the Department of Obstetrics and Gynecology of Wuhan Central Hospital, encountered a group of knowledgeable perimenopausal women in clinical practice. Poor skin elasticity, vaginal atrophy, inability to insert two fingers, discomfort during intercourse, and pain during intercourse." As a result, Director Wang Shufan asked us for help, hoping to solve these problems. Since then, we have cooperated for more than 10 years of exploration and achieved a number of encouraging results.

In fact, on the road of exploration, just like playing an NBA game, there must be good collaborators and strong opponents. To build a useful theoretical framework, you should not only have excellent teammates, but also have great opponents to push yourself to reflect and move forward. As NBA players often say: "Those that can't kill you will always make you stronger." Very benefit from these cross-border enlightenment.

On January 4, 2003, a great opponent appeared. The British Medical Journal BMJ published an article saying: "Many of the scientists and doctors who redefine FSD are closely related to pharmaceutical companies", "FSD It's a disease created." Therefore, the research on FSD, including basic, pharmaceutical, clinical and other aspects, constitutes a total negation. Even more challenging is that there is a newspaper in China that publishes 1.46 million copies per week and is read by 6 million knowledgeable readers. The "Southern Weekly Weekend" in the science edition has the full report of BMJ's "FSD is a man-made disease". Information. Obviously, the entrepreneurial road ahead of me may end here. Nevertheless, the global academic community remained silent for 10 years.

However, reality will not change due to certain opinions, and time will continue to create many menopausal women. "The demand is there, the hope is there", we chose to stick to it. In 2008, in the Chinese Journal of Sexual Science, we published the results of 918 cases of treatment of sexual discomfort and pain during FSD, indicating that there are indeed physiological factors in FSD, and satisfactory clinical effects can be achieved.

In terms of theoretical exploration, after 10 years in 2013, we wrote the article "Study on Pain Control of Entering Sex (Intercourse)". This is a special study that explores what happens to our body when it is difficult to make love. The purpose is it is for those women who are disappointed, confused or even suffering from sex, as well as scientists and doctors who have been misunderstood for a long time but are still working hard to explore it.

The research includes the discussion of etiology and pathology, and introduces "medical ethics" and "evidence-based medicine" thinking. Research shows that: "Disease medicine and sexual medicine differ in the judgment of'disease', and the two are based on'survival' and'quality of life' respectively; the inability of entering pain to be pleasant does not affect survival, so it is not considered squarely by traditional medicine. This is the root cause of a large number of patients having nowhere to seek medical treatment." There are indeed physiological factors in the pathology of FSD. "Strong pain can cause neurohypersensitivity; negative emotions generated by neurotransmitters can lead to inhibition of the endocrine system; and the high stretchability of the vaginal mucosa needs to be repaired in a highly sensitive state, etc. Wait.

More particularly, sex between husband and wife "is a physical and mental movement that requires coordination, interaction, participation, and sharing." FSD can cause difficulties or inability to have sexual intercourse, affect the "pleasure" of others, and bring "distress" to others. Therefore, FSD has become a related symptom, especially the requirement of "sexual obligation" within marriage, which makes the patient in a state of extreme aggrieved, depressed, and desperate. FSD can even cause long-term asexuality, which often triggers "anonymous fire" between couples and lovers, leading to the cold war, outbreaks of confrontation, and even affair, which directly endangers marriage relations and family stability. After the symptom of pain during sexual intercourse is amplified and superimposed by sociology, it often produces pain that exceeds the pain itself. Confusion, depression, fear, tolerance, grievance, and helplessness are common situations in menopausal FSD patients. Therefore, FSD is not a manufactured disease, and the article systematically denies the argument that "FSD is a man-made disease".

In 2013, the abstract was approved by Dr. Ilham, the chief scientist of the Ministry of Health of Bahrain, a member of the international expert group "Family Medicine, Sexual Health Management" of the "World Health Organization", and was selected into the "21st World Sexual Health Congress" and won Conference speech. It was the first to speak up internationally on FSD issues. After the official recommendation of the World Association for Sexual Health (WAS), the British F1000 included this abstract and the PPT of the conference speech. In 2017, 14 years after BMJ published the argument that "FSD is a man-made disease", the article was published in full in the gynecology section of the US "Scientia Ricerca" science network, thus saving the dignity of the international academic community. Dr. Mariana Doherty, Chairman of the Scientific Committee of the World Association for Sexual Health (WAS), said "This research is very popular and worthy of recognition."

Obviously, going through menopause FSD would be an extremely bad situation. For women who are about to enter menopause, FSD is the case? Or is it a high probability event? Why are FSD problems common in menopause? I will never forget that it was a Friday night, and the office building was already quiet. After several years of thinking..., I wrote a series of inferences: from the difficult situation of "thinking" but "cannot" in menopausal sex, it can be found that the sexual instinct should include "thinking" and "can". Does the sexual instinct have a material basis? What is it that decides "thinking" and "can"? For more than a century, after a large number of observations and experimental studies, people have realized that androgen (T) is positively related to sexual desire. When T is at its peak, women show the demand for active sex, and T has become a sufficient condition for female sexual behavior. . "E2 can stimulate the secretory function of secretory cells" and plays an important role in producing vaginal lubrication. E2 is a necessary condition for female sex.

If we consider the necessary and sufficient conditions for sex and the dimensions of species reproductive competition, we can find that animal reflex ovulation (as long as they mate to ovulate) has obvious reproductive advantages over human cyclic ovulation. As a kind of compensation, humans use the ovarian autonomous and periodic secreted sex hormones T and E2 to match. Since T is positively correlated with libido, it corresponds to the peak value during ovulation. The peak value contributes to the occurrence of "active sex" and is beneficial to "sperm and egg". "Encounter. So it has the function of "reproductive reminder". In particular, the growth and decline of E2 also has a corresponding peak, which provides support including lubrication (entry) and vaginal mucosal keratosis (tolerant exercise ejaculation) for sexual activities during this period.

Oh my god! From reproductive prompts to lubrication and keratinization, isn't this a mechanism? Isn't there a compensatory mechanism in women? We are the first to recognize this reproductive compensation mechanism! If this mechanism really exists, then it should be accepted by the world's sexology and gynecology circles! At this time, outside the window of my office, the tall buildings reflected by the lake and the rolling traffic in the distance have all dimmed the night. I was immersed in shock, even excited for a while.

The following day, I wrote this mechanism into an abstract entitled "Menopausal Sex Features". In July 2015, this abstract was successfully selected into the "22nd World Sexual Health Conference" and became the video display of the conference. One of 70 abstracts. The "reproductive compensation mechanism" has actually been accepted by the world's sex academia, and F1000 has also included this abstract. The editor-in-chief of the "European Gynecology" magazine, Dr. Maria Carter browsed this abstract on F1000 and said in an email to us: "This will definitely promote the current research in gynecology, which will lead to huge changes in professional practice and Paradigm shift". In November 2015, after international peer review, "European Gynecology" magazine published the full text of "Menopausal Sex Characteristics".

I think this is a gift from God to me, and it is there, because there is such a mechanism, and it has the characteristics of "non-reproductive and non-compensatory" and "non-gradual withdrawal". "It is only when the follicle stops growing and developing, E2 declines rapidly, and secretion is closed after menopause", thus losing the original autonomous and rapid lubrication ability in menopausal sex. "50% of women have FSD problem of painful intercourse after entering menopause." This is the root of menopause problems. Isn't it amazing? So I want you to understand all of this. It's really shocking.

In 2012, the Yale University School of Medicine published a study "Stress destroys self-control", which revealed several important relationships between stress and the brain: "The prefrontal lobe acts as the control center, coordinating judgment, decision-making, recall and other advanced cognitive functions"; "under long-term pressure, the dendrites of neurons in the prefrontal cortex shrank,

and the area responsible for logical reasoning began to shrink"; "Once the pressure disappears, the dendrites will regenerate. But if the pressure is too high, the regenerative ability will disappear"; "Huge, uncontrollable pressure will cause the connection between neurons to be interrupted, and the function of the prefrontal cortex will be closed." Drawing lessons from these latest achievements in stress and the brain, we have since chosen to focus on the study of "sexual stress and cognitive impairment" from the dimensions of gynecology and human sexology.

After several years of exploration, in 2017, we wrote an abstract titled "Sexual Stress: A Secret Stressor". The article stated: "Sexual stress is a category of stress, which is prone to, persistent, and potentially irresistible. The characteristics of control are significantly related to menopausal syndrome.", "Menopausal syndrome is essentially a negative stress response that an individual thinks is not coping with possible", "Sexual stress is a hidden source of stress, and through negative Stress is associated with MCI and AD".

Very surprisingly, the abstract review committee of the 23rd World Sexual Health Conference, an international expert in charge of biomedical research, rejected this abstract twice. Despite this, we insisted on completing this research article. Fortunately, the "European Gynecology" magazine has been reviewed by international peers and published this article with 6 OK and "publish without any modification" suggestions. Subsequently, we received an invitation from the "Second European Conference on Neuroinflammation" (ECN2020) jointly organized by the Centre for Neuroinflammation (OCNI) of the University of Oxford, UK, hoping to participate in the discussion on the etiology and prevention and treatment of degenerative diseases.

A public study in 2017 showed that the "community (large sample) cohort study" started in Shanghai, China, aims to "help the elderly stay away from AD as much as possible." The project leader, researcher Pei Gang, an academician of the Chinese Academy of Sciences, "decided to observe The point is advanced to 55 years old, which is the approximate point in time when mild cognitive impairment begins to appear." And "close to 300 of the 700 people examined were found to have cognitive decline." China "The average age of menopause for urban women is 49.5 years, the menopausal transition period lasts about 4 years, and the 55-year-old Qiahao is the node after the 4-year transition period, which just proves that negative stress can occur during menopause. In a harmful environment, they will face the risk of cognitive impairment. It can be inferred that in the natural state, about 42% (300/700) of people who experience menopause have cognitive decline, while about 64% of people have cognitive decline.

"Because menopausal people need to intensively and intensively deal with these physical, psychological and sociological problems, they are usually under limited pressure for a long time, and they will face the risk of excessive or even huge pressure." Therefore, this A group of people will become a high-risk group at risk of cognitive impairment. So far, the "stress theory" of menopause has initially constructed a theoretical framework related to cognitive impairment. The core idea is that the individual believes that failure to cope with possible negative stress is a risk factor for cognitive impairment, and the environment that can produce such negative stress is a harmful environment that produces cognitive problems.

As Frank Wilczek, (2004 Nobel Prize winner) said, "We need to clarify and repeatedly verify our hypothesis, and revise it when necessary, so that scientific research remains honest and credible."

The clinical research of "Perfect Menopause Leading Cognitive Project" (PMLCP) is based on this framework, and will improve the compliance of participants and prevent menopause through the method of "menopausal sex management" (including sex education and FSD prevention). With the disappearance of reproductive function, sexual function also disappears. Help participants and their spouses to eliminate the state of depression, endurance, suffering, and helplessness. Let the sex energy be released, and make the home full of harmony. PMLCP goal: let us go back to the past!

"Whenever my mood is low, my soul is so tired, Whenever troubles follow, my heart is miserable, I will wait here quietly, when I lean on you, With your encouragement, so I can climb the mountain, With your encouragement, so I can cross the stormy sea. "

Each individual will be the creator of the "ecology", and different ecology will produce different physiological phenomena. Aiming at the specific association between the brain and stress, let us jointly create an ecology suitable for the brain, thereby reducing the occurrence of cognitive impairment.

Ladies and gentlemen, since the first cognition-related case was reported in 1906, if Dr. Alzheimer's expertise and sharpness left us a valuable record of the correlation between symptoms and anatomy, there would be no AD. Such attention and research on degenerative diseases are impossible to talk about. I sincerely thank

Dr. Alzheimer and those who have made unremitting efforts and outstanding contributions to explore the cause and mechanism of AD in the past 115 years. We are all warriors who are not afraid of difficulties and explore the truth. Everyone is a shining star, and everyone gathers together to form a vast galaxy. A non-stubborn, eternal force. Today, AD is harming innocent people at a rate of "one every 3 seconds", adding a huge burden to society and families. It also inspires more people to participate in the struggle. As one of them, I will continue to do my best to promote the development of cognitive impairment prevention and witness the day when AD will eventually be defeated! Thank you again to the conference for giving me the opportunity to speak, thank you all!