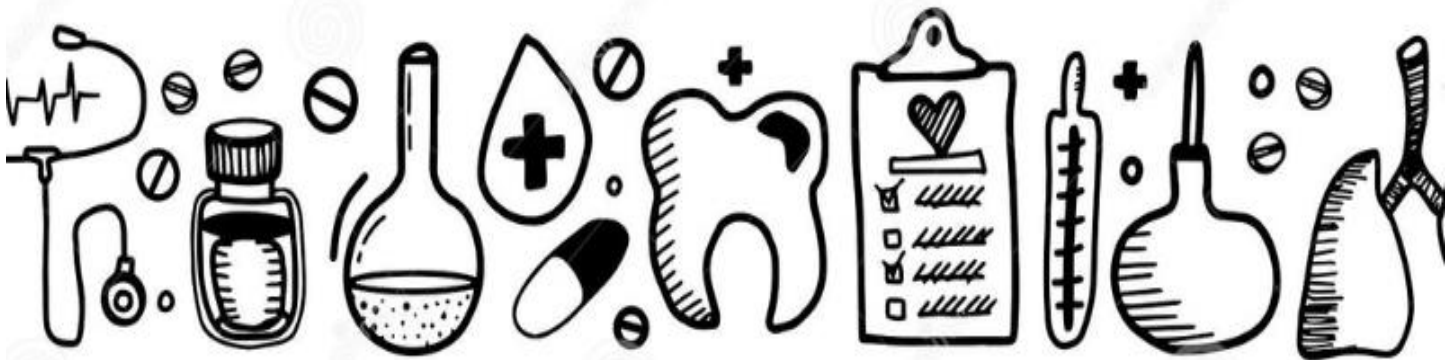


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Presidential Note

We are currently observing a high development in science and innovations associated to biology, life-sciences, and healthcare. To update knowledge and to develop skills on these areas it is critical for professionals, academics, and researchers to participate in international conferences such as the ones promoted by the Healthcare and Biological Sciences Research Association (HBSRA). The participation in HBSRA conferences brings diverse benefits, e.g., enables the development of international networks for collaborations, the acquisition and sharing of knowledge and ideas, to take part in debates, and to promote the development of new visions such as how science and the community can contribute further on these areas, towards the benefit of society. The Proceedings associated to HBSRA conferences are therefore an important tool to resume the work conducted along these events. We invite all the stakeholders on these areas to be an active member of our community, and especially to participate on HBSRA conferences, taken advantages of all opportunities associated with it.


Dr. Cecília R.C. Calado

President


ISEL-Instituto Superior de Engenharia de Lisbon, Portugal

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Healthcare and Biological Sciences Research Association (HBSRA) is an international community of researchers, practitioners, students, and professionals for the development and spread of ideas in the field of healthcare and life sciences.

HBSRA is promoted by Eurasia Research. HBSRA aims to bring together worldwide researchers and professionals, encourage intellectual development, and create opportunities for networking and collaboration. These objectives are achieved through academic networking, meetings, conferences, workshops, projects, research publications, academic awards, and scholarships.

The driving force behind this association is its diverse members and advisory board, who provide inspiration, ideas, efforts and drive collaborations. Scholars, Researchers, Professionals are invited to become a member of HBSRA and join this ever-growing network, working for benefit of society and research with the spirit of sharing and mutual growth.

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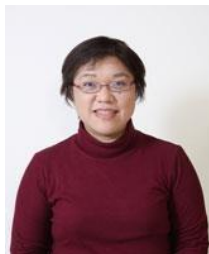
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Preface:

Healthcare and Biological Sciences Research Association (HBSRA) is an international forum of researchers, academicians, and practitioners for sharing knowledge and innovation in the field of healthcare and life sciences. HBSRA aims to bring together worldwide researchers and professionals, encourage intellectual development, and providing opportunities for networking and collaboration. This association meets its objectives through academic networking, meetings, conferences, workshops, projects, research publications, academic awards, and scholarships. HBSRA strives to enrich its diverse group of advisory members. Scholars, Researchers, Professionals are invited to freely join HBSRA and become a part of a diverse academic community, working for benefit of academia and society through collaboration and vision.

For this conference around 20 Participants from around 7 different countries have submitted their entries for review and presentation.

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We hope to have an everlasting and long-term friendly relation with you in the future. In this context, we would like to share our social media weblinks:

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You will be able to freely communicate your queries with us, collaborate and interact with our previous participants, share and browse the conference pictures on the above link.

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Editor: Dr. Davis Lazarus

Publication Process:

All accepted original research papers in the English Language will be published in selected journals as per the publication policy, as available on the conference website. Once you receive the Invitation/ Acceptance letter, that means your full paper is also accepted for publication in an International Journal, if you follow the communicated editorial instructions/ guidelines.

The journal publication will be peer-reviewed, checked for plagiarism, indexed, archived, open access, referenced by CrossRef and will carry ISSN number and DOI.

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A list of registered papers is sent to all the participants of the conference within a week's time after the conference. Please see, if your paper is included in the list. If not, please write back to us for inclusion. This list would also mention for any deficiency/incompleteness found in the submitted paper. You would be given 10 days to return your complete papers/ required information.

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If the paper received is complete in all regards as per the comments/ suggestions, it would be sent for final publication, else we would send it again to you and finally, 5 days would be given to you for its improvement. Finally, the paper is published and the authors are informed about the published paper by email, which contains the paper URL, DOI, Citation, and other related information.

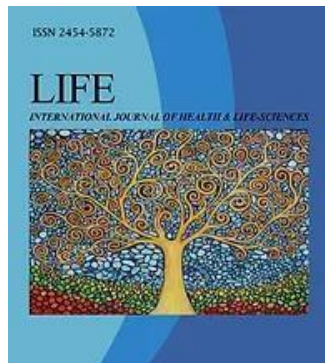
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Authors may request the conference secretariat for withdrawing their paper, for publishing it elsewhere (in the journal of their choice). In such cases, the requested papers are removed from the publication process. The withdrawal requests may be given to the conference secretariat before the commencement of the publication process (7 days after the conference).

Acknowledgements

Our sincere thanks go to our outstanding supporters who made this great and interesting conference possible.

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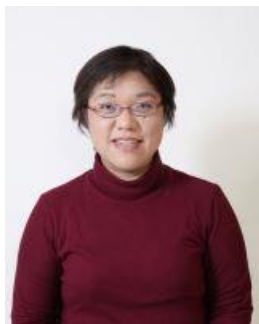
HBSRA Institutional Members



Some special thanks go to our outstanding Key-Note speakers, not only for their inspiring and highly interesting presentations but also for their input and contributions in the discussions and Q&A sessions during the conference:

KEYNOTE SPEAKERS 2023

Topic: Hospital Nurses: Their Mental Health and Intention to Leave Work



Dr. Yoshiko Yamaguchi
Home Care Nursing, Faculty of Nursing, Kwassui Women's University, Japan

Dr. Yoshiko Yamaguchi has received her Ph.D. at Kyushu University during the period of 2013-2016. Currently, she is working as a research associate in Home Care Nursing, at the Faculty of Nursing, Kwassui Women's University, Japan. She has successfully completed her responsibilities as a reviewer of eighty-one research articles in twenty-four journals from 2016-present. And she has been serving as an editorial board member of two journals; LIFE: International Journal of Health and Life-Sciences and Journal of Practical and Professional Nursing and has been delegated vice president of the Healthcare and Biological Sciences Research Association (HBSRA).

Topic: Recent Trends in Infectious Disease Modelling



Dr. (Mrs.) W. G. Samanthi Konarasinghe
Academic Director & Statistical Consultant, Institute of Mathematics and Management, Sri Lanka & Australia

Dr. (Mrs.) W. G. Samanthi Konarasinghe, an award winning Scientist has served as a Statistical Consultant and an Academician for more than two decades. She has developed various Mathematical and Statistical techniques to the world. The Circular Model (CM) and Sama Circular Model (SCM) are two of the widely applied techniques whilst the Damped Circular Model (DCM) and Forced Circular Model (FCM) are the recently developed models. Dr. Samanthi has won the Best paper Award from International Conference on Advances in Mathematics, Computers & Physical Sciences and the International Conference on Business, Economics, Social Sciences & Humanities for her research findings. She was awarded the "IMRF BEST SCIENTIST AWARD, INDIA" for her invaluable contribution to the field of Statistics. She has been in constant demand due to her new findings, gets invitation from various destinations to share her knowledge as the keynote speaker, invited speaker etc. at international research forums in Thailand, Singapore, Malaysia, India, Australia and many other countries. Also, she was the guest of honor and the chief guest of many International research forums. Dr. Samanthi is a multi-disciplinarian; has obtained a Bachelor of Science Degree in Mathematics; Postgraduate Diploma in Industrial Mathematics; Master of Science in Applied Statistics, Master of Business Administration (MBA), and Doctor of Philosophy in Statistics, Doctor of Philosophy in Statistics. Also has the Diploma in Classical Music. She is a member of; the American Statistical Association (ASA), Statistical Society Australia (SSA), Institute of Applied Statistics, Sri Lanka (IASL), and National Science Foundation (NSF), Sri Lanka. She is the Editor in Chief of, Journal of New Frontiers in Mathematics & Statistics; Journal of New Frontiers in Economics & Business; Journal of New Frontiers in Healthcare & Biological Sciences; Journal of New Frontiers in Education & Social Sciences, published by the Institute of Mathematics and Management of Sri Lanka. Also, an Editorial board member of the American Journal of Theoretical and Applied Statistics (AJTAS). She is an Advisory Member Technical/ Scientific Conference Committee member of the Scientific and Technical Research Association (STRA). Most interestingly, Dr. Samanthi is not only a Scientist but also an Artist; a Violinist, Painter, Writer, Drama producer, and actress. The membership magazine of the American Statistical Association; "AMSTATNEWS" wrote two testimonials on her.

Presenters

Development of Guidance Activities in An Elementary School

Janjira Wongprapairot

Counseling Psychology and Guidance Department, Faculty of Education, Songkhla Rajabhat University, Thailand

Mali Praditsang

Counseling Psychology and Guidance Department, Faculty of Education, Songkhla Rajabhat University, Thailand

Kriangsak Rattakul

Counseling Psychology and Guidance Department, Faculty of Education, Songkhla Rajabhat University, Thailand

Kosanh Awae

Counseling Psychology and Guidance Department, Faculty of Education, Songkhla Rajabhat University, Thailand

Abstract: This study aims to develop guidelines for guidance activities in elementary schools and disseminate knowledge guidelines to teachers to organize guiding activities for students. This article defines guidance activities, types of guidance jobs, guidance services, guidance principles in elementary schools, the role of guidance teachers in elementary education, types and characteristics of guidance activities, ideas for developing guidance activities, and the role of personnel involved the development of guidance. Guidance activities are activities organized to encourage and develop students to grow to their full potential, and the development of guidance activities in elementary schools must receive cooperation from administrators, teachers, parents, students, and external agencies. The activities must align with the problems, needs, interests, and nature of each student. A student-centered should help students to their own and give them the freedom to think and make their own decisions, help them develop thinking and decision-making skills to solve problems, deal with what is happening appropriately, and live in society happily.

Keywords: Guidance, Activities, Development, Services, Nature, Types

Introduction: Guidance activities became part of student development activities in the core curriculum in 2008. The school must provide for students in conjunction with teaching to develop students' key competencies in five areas: communication, thinking, problem solving, life skills, and technology. However, elementary schools have done less to recognize the importance of guiding activities and have not provided enough guidance classes for students compared to secondary schools or extension schools. This deficiency means that students lack opportunities for "guiding activities." Guidance activities are activities that promote and develop abilities and must focus on the particular needs of the individual student. The organization of activities must be consistent with a student's problems, needs, interests, and nature. Guidance activities must cover all five aspects of guidance services, individual data collection services, information services, consulting services, personnel placement, and follow-up services. Successful guidance activities require cooperation from many parties, including administrators, teachers, parents, teachers of librarians, school nurses, and external agencies. All parties play an essential role in the development of guidance activities. It is imperative to develop or organize guiding activities for students; teachers are important because they are the ones closest to the students. Teachers, including guidance

teachers, homeroom teachers, and classroom teachers, are integral to the process. Guidance teachers are responsible for providing advice to teachers and parents of students in providing knowledge, advice, and guidelines for knowing and understanding students through various methods such as homeroom and education guidance activities. The classroom teacher and the course teacher are responsible for helping to contact students so that they can get to know each other and have a good attitude towards guidance services. This includes cooperation with guidance teachers in collecting student information and organizing guidance activities for students and teaching and learning activities that focus on giving students the freedom to think and make decisions on their own and, understand emotions, feelings, know how to think, and have a decision-making process to solve problems on their own, know how to set goals and plan life in terms of education, professional and personal, and social interests, be able to adapt quickly to all changes, be able to face problems and challenges, deal with what is happening appropriately, and live in society happily.

Definition of Guidance Activities: Guidance activities have been defined in various ways. For example, Jetsada Bunma Home (2020, p. 41) defined guidance activities as “various activities organized to encourage and develop students to grow to their full potential.” The organized activities must align with the needs of learners and society by considering the difference between individuals, enhancing life skills, emotional maturity, multi-cognitive learning, and building good relationships. Therefore, the guidance activities cover various activities of the guidance service, including organized in-class and outside-of-class. Nutthawee Nongnuch (2009) said guidance activities were the mass of experiences that allow each client or group to act or participate in achieving goals by which they will develop or strengthen themselves and prevent or solve problems appropriately in education, professional, personal, and social realms.

Guidance Services: Aspects of Guidance Services: Atchara Erbsuksiri (2021, p. 214) summarized three aspects of guidance services as follows: Education guidance is a process of assisting students on specific learning matters like further education guidelines and creating clarity in learning and helps students to make appropriate choices and adapt themselves in their studies. Vocational guidance is a process of helping students to get to know the world of the profession so that students can make plans and decide on a career that matches their aptitudes, interests, and needs. Personal and social guidance is a process to help students understand themselves and their surroundings, such as physical personality and composition, making friends, taking care of health, etc., to live and adapt happily to society.

Types of Guidance Services: Wananya Kaewkaewpan (2020) stated that guidance services are divided into five types as follows: 1. An Individual Inventory Service helps teachers get to know and understand their students better by recognizing the differences between individuals and employing various techniques and methods, such as observation and interviews. 2. An Information Service provides information, news, and knowledge to students by presenting information in various forms like signs, communications, electronic media exhibitions, inviting speakers, and study tours. 3. A Counseling Service is considered at the heart of guidance services and provides counseling to students with personal problems, continuing education, and future careers. 4. A Placement Service systematically provides internal and external scholarships for students. 5. A Follow-up Service monitors student behaviors and development and relies on the cooperation of the teacher's advisor in following up with students, such as following up on student entrance exam results.

Guidance Principles at the Elementary Level: Pornwalai Ariyarasamesap (2011) discussed the principles of guidance services at the elementary school level and said that guidance services should be organized to help all students equally and acknowledge differences between students. Teachers will have a proactive duty to guide students to choose and make decisions in solving various problems and help students to help themselves. Guidance must be included in teaching and learning activities for each subject, and the content taught should be related to present and future situations through guidance activities. All teachers must work together with homeroom teachers, and successful guidance activities require the cooperation of parents and the community.

The Role of Guidance Teachers in Primary Education: Somporn Wongwithoon (2012) stated that guidance teachers are essential in mentoring teachers and parents of all students. Guidance teachers are responsible for coordinating with those involved inside and outside of an educational institution and take

the lead in organizing guidance activities and supervising students. Guidance teachers provide information, knowledge, advice, and techniques. Guidance should be based on psychological principles to understand and screen students through various methods such as observation, interviews, and questionnaires. Guidelines for taking care, helping, promoting, and developing students should be provided to all teachers. These included guidelines for organizing homeroom activities or activities for all groups of learners in line with their abilities, aptitudes, and interests. Understanding the nature of each student's differences can help students develop themselves to their full potential.

Types and Characteristics of Guidance Activities: The Office of the Basic Education Commission (2016, pp. 15-19) has classified the types of guidance activities into three types as follows: 1. Individual Guidance Activities approaches seek to meet individual needs by recognizing students' differences. This guidance relies on the main principles based on service to the recipients. In the scope of service, personal and social development, educational development, and professional development should be provided 2. Group Guidance Activities are those that have been designed to provide an experience for groups of students with the same or similar interests. Students learn together in class to apply knowledge to develop skills and abilities through activities orientation, play activities to explore career paths, and interpersonal communication development activities like friends helping friends activities. Group Guidance activities are designed to prevent problems. The scope covers personal and social development in educational development, and group activities should be characterized by meeting the needs of small and large student groups. 3. Guidance Activities are special projects that respond to the needs of groups of students with specific special needs or who require a service method. These differ from the individual counseling or guidance activities mentioned above, which must be organized and experienced systematically. Guidance activities may require time, opportunity, or suitable learning resources such as vocational camp projects or guiding parents of students with special needs in hospitals.

Concepts for Developing Guidance Activities: Saiyud Mikrit and Chatchai Pitakthanakom (2017) discussed development guidance activities concerning education, professional, personal, and social levels. The following are the principles that should be followed. 1. There is a clear structure and arrangement of guidance activities based on a survey of student needs. There are regular guidance activities, and the objectives are a set of activities that are evaluated clearly. Age, gender, education level, and socio-economic status should be considered. 2. Activities that focus on content rather than fun should be organized. Students should have the opportunity to discuss and practice skills rather than merely lecturing or giving examples. 3. Academic principles should be employed to check the quality of the guidance activities package, and various psychological techniques should be applied.

Roles of Those Involved in Developing Guidance Activities: Administrators: Supin Chaikaew (2018, pp. 227-237) stated that the successful development of guidance activities requires the cooperation and assistance from personnel of all departments, such as administrators, first class teachers, subject teachers, guidance teachers, parents, librarians and nurses, in which each department has different roles and responsibilities. School administrators play an important role in advancing educational institutions. First, they provide the budget, place, equipment, and various tools of guidance. Second, they must initiate work, set guidelines for school guidance, and appoint and coordinate the responsibilities of the guidance committee. Third, administrators must support guidance counselors and offer them the opportunity to attend training seminars or organize training to educate them. Fourth, school administrators must continually assess the guidance service in meeting student and community needs. Fifth, school administrators must recruit guidance teachers with the appropriate qualifications and suitable personalities. Last, school administrators are responsible for setting the teaching and learning schedule following the guidance activities such as organizing homeroom activities.

Classroom Teachers: A classroom teacher is essential in organizing the guidance activities and providing an environment necessary for students to adapt. Therefore, classroom teachers have several roles and responsibilities towards guidance services. They are to: 1. Study and understand the objectives and scope of the guidance program; 2. Cooperate and coordinate with the guidance department in gathering information and conducting meetings; 3. Help coordinate and publicize for students to know and understand and have a good attitude towards service. 4. Advise and encourage students to use the

guidance service; 5.Cooperate with the guidance department in organizing homeroom activities by providing information about learning the etiquette of being in society; 6.Participate in the new student orientation program by helping educate students about the rules and regulations;7.Use various guidance techniques and tools, such as observations, interviews, and study, to understand student behavior; 8.Help refer students who deserve counseling to the guidance department; and 9.Act as a communication medium between the parents of the students and the school to promote cooperation in helping or solving students' problems.

Subject Teachers: Subject teachers have the following roles and responsibilities in providing guidance services to students: 1. They are responsible for providing a teaching atmosphere that helps students learn better. 2. The subject teacher must try to explain the importance of the subject and occupations related to the subjects studied to the students. 3.They must assist the guidance teacher in collecting information about each student and organizing student guidance activities. 4. They sometimes must serve as a mentor and a resource for students. 5. They liaise with parents of students and support students in using the guidance service. 6. They must be a mentor for students in organizing various activities.

Guidance Counselor: Guidance counselors play a direct role and have several responsibilities. They are to: 1. Be a leader in the implementation of guidance activities in schools by providing comprehensive guidance services: collection, information, consultation, personalization, and follow-up services; 2. Coordinate and work with school administrators to organize training for knowledge about guidance to school personnel; 3. Provide public relations activities like inviting school personnel to be interested in guidance work and using the guidance service; 4. Educate teachers, personnel of various departments of the school, and parents about the purpose and importance of the guidance service; 5. Acting as a contact for cooperation from agencies, institutions, or people in the community in organizing guidance activities such as requesting to see places and seeking scholarships for economically disadvantaged students; 6. Educate students about the guidance service and disseminate information among various groups of people to inform them of the progress; and 7. Measure and evaluate guidance work to develop more appropriate guidance activities.

Parents: Parents are the closest people to students. Parents should cooperate closely with schools to help promote the smooth development of students. Parents have the following roles and responsibilities towards the guidance service. They should 1. Cooperate with guidance teachers in collecting information about children in need and provide accurate information, not concealed; 2. Cooperate with guidance teachers in adjusting children's behavior willingly; 3. Give full support to children's teaching and learning activities; 4. Always take care and support children in receiving guidance services; and 5. Inform the school when there a problem or conflict exists.

Development of Guidance Activities: Kanchana Noiwiwimol (2017) studied the development of guidance activities to promote the education and career development of Mathayomsuksa 3 students. Noiwiwimol developed a set of guidance activities to promote education and career development for Mathayomsuksa 3 students, according to specified criteria. Students studied through a series of educational and occupational activities. Learning outcomes after learning were significantly higher than before, and students expressed high satisfaction with the educational and career promotion activities. Sareewan Suparerkchatkul (2020) studied enhancing the optimism of adolescent students through guidance activities. Suparerkchatkul found that students were overall optimistic, and each aspect was at a medium level. Students who participated in the guidance activities were more optimistic after the experimental intervention than those who did not. Jirapat Thipanya (2020) studied the effect of using guided activities according to the metacognition strategy to enhance the self-efficacy perceptions and decision-making skills of grade 5 students. Thipanya found that the self-efficacy perception and decision-making skills of Prathomsuksa 5 students after participating in the guidance activities according to the metacognitive strategy were higher than before they participated. Hellen chelagat kuchi, Joshua manduku, and Hellen sang (2017) studied the effectiveness of guidance activities in managing undisciplined behavior in schools for secondary education. They found that guidance activities can help regulate the behavior of a good level student. Digdem M. SiYEZ Alim KAYA and Asli UZ BAS (2012) surveyed the teacher feedback on the classroom guidance program. The study found that many elementary teachers were interested in classroom guidance activities, but most high school teachers were reluctant to participate in class guidance

activities. However, 80% of primary and secondary teachers said that most classroom guidance activities were essential to students. In primary and secondary teachers, 84.3% of primary school students wanted advice on classroom guidance activities, and 49.6% of elementary school teachers wanted advice on teaching and learning programs in the classroom.

Summary: The development of guidance activities will be successful when cooperation from many parties, including school administrators, teachers, parents, and students, is received. Guidance teachers play an essential role in developing guidance activities. This is because knowledge and understanding of the science of psychology are critical in helping young students and developing direct guidance principles. However, in the current situation, most elementary schools do not have school guidance teachers. Class teachers and subject teachers play critical roles in learning, and they can learn to understand student behavior via various techniques such as observation, interviews, and tests. The social dimension has a primary role in organizing guidance activities for students to suit their age range and align with their needs. Each student's interests must be recognized to organize activities, and teachers must consider student differences and organize appropriate activities to encourage independent thinking and decision-making so students think about and solve problems by themselves, quickly adapt to changes, and live happily in society.

Reference: Atchara Erbsuksiri. (2021). Psychology for teachers. (6th ed). Bangkok: Chulalongkorn Publishing House university. Digdem M. SiYEZ Alim KAYA and Asli UZ BAS. (2012). Investigating Views of Teacher on classroom Guidance Program. <https://files.eric.ed.gov/fulltext/EJ1057380.pdf> Hellen chelagat kuchi, Joshua manduku, and Hellen sang. (2017). Effectiveness of Guidance and counseling programs in managing indiscipline cases in secondary schools in bureti sub – county, kericho county, kenya. <https://oapub.org/edu/index.php/ejes/article/view/1214/3538> Jetsada Bunma Home. (2020). Principles of Guidance and Student Development. Faculty of Education, Nakhon Pathom Rajabhat University. Jirapat Thipanya. (2020). Self-efficacy perception and decision-making skills of Mathayomsuksa 5 students. <http://ithesis-ir.su.ac.th/dspace/bitstream/123456789/3277/1/59263302.pdf> Kanchana Noiwiwimol. (2017). Development of guidance activities to promote educational development and careers of student's Secondary school year 3. <http://fulltext.rmu.ac.th/fulltext/2560/123721/Noiwiwimol%20Kanjana.pdf> Nutthawee Nongnuch. (2009). The effect of guidance activities for developing students' self-knowledge and understanding Secondary 3. http://thesis.swu.ac.th/swuthesis/Gui_Cou_Psy/Nattavee_N.pdf Office of the Basic Education Commission. (2016). Guidance activity design emphasizing Improve skills for learners. Bangkok: Thailand Agricultural Cooperative Assembly Printing House Ltd. Pornwalai Ariyarasamesap. (2011). A study of problems and needs for service providers' guidance educational institutions and teachers in primary schools Bang Sue District Office Bangkok. https://ir.swu.ac.th/jspui/bitstream/123456789/1140/1/Pornwali_A.pdf Saiyud Mikrit and Chatchai Pitakthanakom. (2017). The use of Buddhist guidance activities to promote Life skills in learning management, time and relationships of secondary school students in Bangkok and its vicinity. <https://so03.tci-thaijo.org/index.php/JMND/article/download/176672/129240/> Sareewan Suparerkchatkul. (2020). Enhancing the optimism of adolescent students by Guidance activities. <http://ir-ithesis.swu.ac.th/dspace/bitstream/123456789/1326/1/g611130076.pdf> Somporn Wongwithoon. (2012). Guidance administration. Using the school's Deming Cycle (PDCA) to expand opportunities Educational under the jurisdiction of Chiang Rai Primary Educational Service Area Office, Region 2. <http://www.updc.clm.up.ac.th/bitstream/123456789/1756/1/Somporn%20Wongwithun.pdf> Supin Chaikaew. (2018). Guidance and development of learners. Faculty of Education, Uttaradit Rajabhat University. Wananya Kaewkaewpan. (2020). A Study of Guidance Service Management for Student Development in the 21st Century. <https://so02.tci-thaijo.org/index.php/edupsu/article/view/243505/172074>

Systematic Analysis for the Relationship Between BMI and Tuberculosis

Zhao Huang

Changde Hospital, Xiangya Medical College of Central South University, Changde, Hunan,
China

Jinli Lu

Changde Hospital Affiliated to Xiangya Medical College of Central South University

Abstract: Abnormal body mass index (BMI) is an established risk factor for the onset of active tuberculosis. An increase in Body Mass Index (BMI) by one unit was found to be associated with a reduction of 2% in the incidence of tuberculosis, as evidenced by statistical significance ($P < 0.001$). The adjusted odds ratio of tuberculosis was found to be 4.96 (with a 95% confidence interval of 4.87 to 5.05) in individuals categorized as underweight, whereas those classified as obese had a considerably lower odds ratio of 0.26. This study affirms an association between abnormal body mass index (BMI) and tuberculosis as a significant risk factor.

Keywords: BMI, Tuberculosis, Egger's Test, Binary Random-Effects, Cochran Mantel-Haenszel Test

Introduction: Tuberculosis (TB) and abnormal BMI are two major public health problems worldwide.¹ TB is an infectious disease caused by *Mycobacterium tuberculosis* and abnormal BMI is a complex metabolic disorder characterized by body fat accumulation. TB and abnormal BMI share common risk factors such as malnutrition, diabetes, and socio-economic status. This systematic review aims to analyze the relationship between abnormal BMI and TB.

Methods: In order to gather relevant information, a two-participant review team conducted a data extraction process on chosen studies. The extraction process involved the retrieval of crucial elements such as the primary author's name, date of publication, country of origin, enrollment dates, aggregate sample size with gender distribution, age estimation methodology (median, mean, or highest frequency in age range), tuberculosis category, the presence of comorbidities (particularly HIV and diabetes), as well as the percentage distribution of diverse body mass index (BMI) categories across patient (tuberculosis) and control (non-tuberculosis) groups. The categorization of adult populations as underweight, normal weight, overweight, and obese, according to their body mass index (BMI), was conducted in accordance with the internationally recognized criteria outlined by the World Health Organization (WHO).² These criteria were established by reference to the following threshold values: BMI ≤ 18.50 , 18.50-24.99, 25.00-29.99, and ≥ 30.00 kg/m², respectively.² The analysis did not incorporate patients diagnosed with diabetes. In order to mitigate potential heterogeneity and bias in our findings, we opted to exclusively analyze studies that employed the same BMI categorization utilized in our meta-analysis. In order to determine the prevalence rates of varying BMI categories among both cases and controls, the proportions reported in selected studies were extracted as a percentage of the total number of subjects within each group. The utilization of Egger's test³ was employed in order to evaluate the existence of publication bias, as well as the inclination for effect sizes that have been estimated in studies with diminished sample sizes to deviate from those effect sizes that have been estimated in larger-scale studies. The results obtained from the Egger's test encompassed both t-value and P-value in relation to publication bias. Additionally, the regression intercept, standard errors, 95% confidence intervals (CI), and P-value for publication bias were included in the analysis for publication purposes. The Egger's test, which is deemed statistically significant, utilized a threshold level of $P < 0.1$ as the criterion for detecting any presence of publication bias. The principal measure of interest pertained to the assessment and comparison of the overarching incidence of diverse BMI groups among individuals afflicted with tuberculosis and their respective control counterparts. The study conducted meta-analyses to evaluate the aggregated prevalence, including 95% CI, of diverse Body Mass Index (BMI) categories among subjects categorized as cases and controls. The present study

employed the Comprehensive Meta-Analysis software (CMA) version 3.9 (Englewood, NJ, USA)⁴ to conduct meta-analyses. Specifically, variances of raw proportions or percentages were amalgamated via a binary random-effects model,⁵ acknowledging the existence of population heterogeneity and postulating that the association between body mass index (BMI) and tuberculosis incidence is not homogeneous across different populations. The utilization of forest plots was employed to depict the incidence of distinct body mass index (BMI) categories in individuals afflicted with tuberculosis versus individuals serving as controls, as sourced from the studies under consideration. The present study undertook the estimation of the odds ratios (ORs) accompanied by the 95% confidence intervals (CI) pertaining to the incidence of tuberculosis, while taking into account the different categories of body mass index (BMI). Additional adjustments were made for sex, age, and HIV status. The aforementioned estimations were carried out utilizing the Cochran Mantel–Haenszel test,⁶⁻⁹ as previously reported in literature. The statistical tests implemented in this study were conducted in a two-sided manner, utilizing the SPSS Statistics software, Version 21.0, developed by SPSS Inc. of Chicago. Estimation of projected tuberculosis occurrence in correlation with body mass index was performed in accordance with previous methods,¹⁰ and the model were duly modified to incorporate the variables of gender, age and human immunodeficiency virus infection status. The evaluation of the heterogeneity among the chosen academic literature was conducted by means of the Q test,¹¹ which discerns between the existence or lack of heterogeneity. The Q test, nonetheless, fails to present a comprehensive analysis of heterogeneity and is incapable of recognizing it within the limited number of studies that have been identified for certain comorbidities.¹² Henceforth, the I² index was computed to supplement the Q test and explicate the extent of heterogeneity observed across studies. The I² index values have been previously recommended to be divided into four categories: low (0-30%), moderate (30-60%), substantial (60-90%), and considerable (>90%).¹³

Results: In individuals diagnosed with tuberculosis, the incidence of being underweight was demonstrated to be three times higher in comparison to the control group with statistical significance ($P = 0.001$). On the other hand, the fraction of overweight and obese individuals was found to be two times lower in comparison to controls, also with statistical significance ($P = 0.001$). An augmented body mass index (BMI) of one unit demonstrated a notable inverse correlation with tuberculosis prevalence, indicating a 2% decrease ($P < 0.001$) in its occurrence. The adjusted odds ratio of developing tuberculosis in individuals classified as underweight was 4.96, with a 95% confidence interval of 4.87 to 5.05. Conversely, those categorized as obese had an adjusted odds ratio of 0.26.¹⁴

Discussion: Further research is required to bridge the gaps in knowledge regarding undernutrition and tuberculosis, as stated in the WHO's guideline for nutritional care and support of tuberculosis patients.¹⁵ A better understanding of the impact of undernutrition on the time taken for sputum culture conversion, relapse, and mortality is needed.¹⁶ The repercussions of undernutrition on individuals in close proximity to tuberculosis patients and the possibilities for decreasing the risk of transmission through nutritional interventions must also be explored. It is imperative to conduct additional studies on the role of nutritional supplementation to determine the caloric requirements of patients with tuberculosis and the metabolic and immunological effects of malnutrition and refeeding. Furthermore, the precise mechanistic basis for undernutrition-mediated changes in host resistance against tuberculosis needs to be determined. Well-designed studies from diverse contexts are necessary to investigate the potential of nutritional supplementation in enhancing treatment outcomes and adherence in individuals with active tuberculosis.¹⁷

Limitations: This systematic review has some limitations that should be considered when interpreting the results. First, most of the studies included in this review were cross-sectional, which limits the ability to establish causality. Second, the studies were conducted in various countries with different TB prevalence rates and healthcare systems, which may limit the generalizability of the findings. Third, the studies used different definitions of abnormal BMI and TB, which may affect the comparability of the results.

Conclusion: In conclusion, this systematic review provides evidence for a positive association between BMI and TB. The findings suggest that abnormal BMI should be considered as a risk factor for TB and that public health interventions aimed at reducing abnormal BMI may also have a positive impact on TB prevention

and control. Further research is needed to investigate the underlying mechanisms of the association between abnormal BMI and TB, and to develop targeted interventions to reduce the burden of TB in abnormal BMI individuals.¹⁷

Reference: 1. GBD Tuberculosis Collaborators. Global, regional, and national burden of tuberculosis, 1990-2016: results from the global burden of diseases, injuries, and risk factors 2016 study. *Lancet Infect Dis* 2018; 18:1329-49. 2. Nuttall FQ. Body mass index: obesity, BMI, and health: a critical review. *Nutr Today* 2015; 50:117e28. 3. Egger M, Davey Smith G, Schneider M, Minder C. Bias in meta-analysis detected by a simple, graphical test. *Br. Med J* 1997; 315:629-34. 4. Borenstein M. Software for publication bias. In: Rothstein HR, Sutton AJ, Borenstein M, editors. *Publication bias in meta-analysis - prevention, assessment and adjustments*. Hoboken: John Wiley & Sons, Ltd; 2005. p. 193-220. 5. Tosuntas SB, Danis, man S. Introduction to meta-analysis. In: Karadag E, editor. *Leadership and organizational outcomes: meta-analysis of empirical studies*. Switzerland: Springer International Publishing; 2015. p. 19-28. 6. Badawi A, Velummailum R, Ryoo SG, Senthinathan A, Yaghoubi S, Vasileva D, et al. Prevalence of chronic comorbidities in dengue fever and West Nile virus: a systematic review and meta-analysis. *PLoS One* 2018;13: e0200200. <https://doi.org/10.1371/journal.pone.0200200>. 7. Tripepi G, Jager KJ, Dekker FW, Zoccali C. Stratification for confounding e Part 1: The Mantel-Haenszel formula. *Nephron Clin Pract* 2010;116:c317-21. 8. Clayton D, Hills M. *Statistical models in epidemiology*. Oxford: Oxford University Press; 1993. 9. Landis JR, Sharp TJ, Kuritz SJ, Koch GG. Mantel-Haenszel methods. 2014. <https://doi.org/10.1002/9781118445112.stat04874>. Wiley StatsRef: Statistics Reference Online. 10. Brenner DR, Arora P, Garcia-Bailo B, Wolever TM, Morrison H, El-Sohemy A, Karmali M, Badawi A. Plasma Vitamin D levels and risk of metabolic syndrome in Canadians. *Clin Invest Med* 2011;34: e377-84. 11. Cochran WG. The combination of estimates from different experiments. *Biometrics* 1954; 10:101-29. 12. Higgins JPT, Thompson SG. Quantifying heterogeneity in a meta-analysis. *Stat Med* 2002; 21:1539-58. 13. Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, Ioannidis JP, et al. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: explanation and elaboration. *BMJ*, 2009;339: b2700. <https://doi.org/10.1136/bmj.b2700>. 14. Badawi A, Gregg B, Vasileva D. Systematic analysis for the relationship between obesity and tuberculosis. *Public Health*. 2020 Sep; 186:246-256. doi: 10.1016/j.puhe.2020.06.054. Epub 2020 Aug 28. PMID: 32866737. 15. World Health Organization (WHO). Guideline: nutritional care and support for patients with tuberculosis. Geneva: WHO, 2013:18-9. 16. Bhargava A. Undernutrition, nutritionally acquired immunodeficiency, and tuberculosis control. *BMJ* 2016; 355. 17. Sinha P, Davis J, Saag L, Wanke C, Salgame P, Mesick J, Horsburgh CR, Hochberg NS. Undernutrition and Tuberculosis: Public Health Implications. *J Infect Dis*. 2019 Apr 16;219(9):1356-1363. doi: 10.1093/infdis/jiy675. PMID: 30476125; PMCID: PMC6941617.

The Anti-Inflammatory Effect of Lectin Isolated from *Castanea Crenata* Against Lipopolysaccharide (LPS) Induced Renal Stress in Rats

Youcef Necib

Department of Biochemistry and Natural and Life Sciences, University Mentouri
Constantine1, Algeria

Torche imene

Laboratory of Microbiological Engineering and application, Faculty of Natural and Life
Sciences, University Mentouri Brothers Constantine.

Abstract: Novel Anti-inflammatory agents are used for the treatment of various conditions, such as infections, cancer, rheumatoid arthritis, etc. The screening for better agents and evaluating their Anti-inflammatory potential is becoming a field of major interests all over the world. Lectins are proteins or

glycoproteins highly distributed, especially in plants these bioactive molecules play many roles (defense, growth, regulation of membrane glycoprotein synthesis, recognition and intercellular communication) and that express various biological activities the reason it can be used as future agents for the treatment of human diseases. *Castanea crenata* is one of the natural biosourced plants, which known and used in the traditional medicine for its therapeutic properties. The study was designed to investigate the possible protective role of *Castanea crenata* lectin in lipopolysaccharide renal inflammatory, where the effects of *Castanea crenata* lectin on LPS induced oxidative and renal stress were evaluated by serum creatinine, and uric acid levels and kidney tissue lipid peroxidation, GSH levels, SOD, GSH-Px, GST and catalase activities. The Administration of LPS induced significant increase in serum: creatinine and uric acid concentration reviling renal inflammatory. LPS also induced oxidative stress, as indicate by decreased kidney tissue of GSH level, SOD, GSH-Px, GST and catalase activities along with increase the level of lipid peroxidation. Furthermore, the treatment with the lectin of *Castanea crenata* was markedly reduced the elevated serum levels of both of creatinine and uric acid and relieved the effects of LPS on oxidative stress markers and reduced the histological changes caused by LPS in kidney, which indicates that *Castanea crenata* lectin could have a beneficial effect against LPS induced nephrotoxicity and oxidative stress in rat.

Keywords: Lectin, *Castanea crenata*, Anti-inflammatory effect, Rat, Lipopolysaccharide (LPS)

Moderating Effects of Stress Coping: Evaluating the Relationships between Personality and Prescription Drug Abuse amongst Young Adults

Farokh Shabbir

Sardar Yasin Malik Professional Development Centre, University of Karachi, Pakistan

Abstract: Background: Young individuals (18 to 25 years old) abuse prescription drugs at the highest rates. College or university audience may come with added risk. Previous studies indicate that personality plays a significant role in the prediction of much addictive behavior. **Method:** The four characteristics of anxiety symptoms, hopelessness, sensation seeking, and impulsivity have continuously been linked. The major focus on overall prescription drug use, inconsistent operationalization of misuse, and failure to account for alcohol use restrict published studies on personality as a predictor of prescription drug abuse. Small and general sample sizes have been used. **Result:** We wanted to know more about how personality influenced total use, use that was approved by a doctor, and misuse of prescription sedatives/tranquilizers, opioids, and stimulants. Young adults in Karachi, Pakistan were included in the large (N = 1755) sample (mean age = 18.6 years; 68.9% female). We hypothesized that sedatives/tranquilizers would be associated to anxiety sensitivity, opioids to hopelessness, stimulants to sensation seeking, and impulsivity to all three. Except for the impulsivity to opioid use path, our "any use" model's predictions were entirely supported. Sensation seeking predicted stimulants for misuse, anxiety sensitivity (marginally) predicted sedatives/tranquilizers, and impulsivity predicted all three. **Conclusion:** Our models advocate for the use of interventions that are tailored to each young adults' personality. Targeting anxiety sensitivity for sedative/tranquilizer misuse, sensation seeking for stimulant misuse and impulsivity for unrestrained prescription drug misuse are specifically suggested by the studies. Interventions that promote early coping skills that address all four qualities may be effective in reducing prescription drug uptake and misuse in the future.

Keywords: Drugs, Prescription Drugs, Sedatives, Tranquilizers, Young Adults

Purification, Molecular Characterization and In-Silico Analysis of Enterocins, A Class Iia Bacteriocin Produced by *Enterococcus Faecium* With Broad Antibacterial Activity

Asma Bashir

Department of Biosciences, Faculty of Lifesciences, Szabist University, Pakistan

Abstract: Due to their potential for use as natural preservatives to enhance food safety and stability and prevent antibiotic resistance in multidrug resistant organisms, bacteriocins generated by lactic acid bacteria have attracted a lot of research. Ten promising Gram-positive isolates were examined in this study. Four *Enterococcus* food isolates exhibiting antibiotic activity against the *Pseudomonas aeruginosa* PA01, PA02, and PA03 MDR strains were chosen from this group. Four food isolates were determined to be *Enterococcus faecium* strains KAE01, KAE03, KAE05 and KAE06 based on analysis of the 16S ribosomal RNA gene. Genotypic and phenotypic screening were used to determine whether the bacteriocin gene was present in these enterococcal isolates. Results showed that all four isolates have the EntA and EntP genes, which encode extracellular surface proteins. Antibiotic resistance phenotypes showed that every MDR isolate was resistant to different antibiotics. Ammonium sulphate precipitation and fast protein liquid chromatography (FPLC) techniques were used to purify the enterocins. These enterocins have a molecular weight of 55 kDa, according to SDS-PAGE. Additionally, these enterocins shown a broad spectrum of antibacterial activity spanning a pH range of 2.0–10.0 as well as a wide range of thermostability, reaching up to 100°C for 1hr and 121°C for 15 min. According to the findings, proteinase K, trypsin, pepsin, and alkaline protease were all capable of degrading all four enterocins. When used against *P. aeruginosa* PA01, PA02, and PA03, SEM analysis revealed that enterocin KAE01 caused changes in the morphology and, to a greater extent, the cell membrane is the target of isolated enterocins. The native bacteriocins EntA and EntP were anticipated to have three-dimensional (3D) structures. Since three simulated structures showed nearly identical secondary structural motifs, such as a beta helix at the C terminus, an alpha helix at the N terminus, and coils at the intermediate residues. Additionally, penicillin-binding proteins (PBPs) that play a significant role in the formation of cell walls were the subject of protein-protein docking simulations. Peptides had good potential for PBP inhibition, according to docking data. Peptides have been seen to bind at allosteric sites in various circumstances. To gain a thorough understanding of the allosteric communication caused by peptide binding in the protein structure, molecular dynamics simulations and adaptive sampling were therefore proposed. These findings imply that isolated enterocins have promise for use in the food sector as a bio-preservative and as a tool to fight antibiotic resistance in multidrug resistant pathogens.

Keywords: *Enterococcus Faecium*, Bacteriocin, Antimicrobial Resistance, Antagonistic Activity, *Pseudomonas Aeruginosa*

A Study to Evaluate the Pattern of Antimicrobial Utilization and Biomarkers in Intensive Care Unit (ICU) Patients in A Tertiary Care Hospital



Mohd Rafi Reshi

Hamdard Institute of Medical Sciences and Research, Jamia Hamdard University, Delhi,
India

Nusrat Nabi

Hamdard Institute of Medical Sciences and Research, Jamia Hamdard University, Delhi,
India

Khairat Butt

Department of Anaesthesia, HIMSR, Jamia hamdard, Delhi, India

Prem Kapur

Deptment of Medicine, HIMSR, Jamia Hamdard, Delhi, India

Arunabha Ray

Hamdard Institute of Medical Sciences and Research, Jamia Hamdard University, Delhi, India

Background: Critical care pharmacology is intended to reconcile important features of intensive care unit (ICU) management including polypharmacy, altered drug disposition and adverse drug events (ADEs). Modern research has established that the critical care patients have drastically deranged redox balance and inflammatory disturbances. The AMAs might further aggravate the scenario and be implicated in various ADEs and drug-disease interactions.

Objectives: A prospective study designed to analyse antimicrobial utilisation pattern and evaluate the oxidative stress and inflammatory biomarkers in Intensive Care Unit (ICU) patients receiving antimicrobials.

Methods: This is an analytic study to be conducted over 2 years; started after due approval from the Ethics Committee. A total of 300 patients from medical or surgical ICU receiving AMAs are included in the study after obtaining written informed consent. The AMA utilization (DDD/100 bed days) and associated adverse drug events (ADE) will be recorded. The subjects will also be analysed for a panel of oxidative and inflammatory biomarkers.

Summary: Increasing APACHE II scores are associated with increase in oxidative stress and inflammatory markers, implicating role of oxidative stress and inflammation in disease severity. Beta lactams percentages are the most commonly prescribed antibiotics in MICU followed by other classes. In SICU beta lactams percentage are once again most prescribed antibiotics followed by other classes. 3 adverse drug reactions were reported among the 100 critically ill patients, which were mild in severity.

Expected outcome: The study will identify the antimicrobial utilization pattern and cost of treatment in ICU patients. The study will reflect the safety profile of antimicrobials used. The data will evaluate the correlation of oxidative stress and inflammatory biomarkers with AMA associated adverse reactions.

Perceived Self-Efficacy Among Parents Caring for Children with ASD in Middle Childhood

Hong Li

Department of Doctoral Studies, Institute of Health Research, School of Nursing, Azusa Pacific University, Azusa, California, United States of America

Rebecca Burtea, B.S.

Department of Mathematics, Physics, and Statistics, Azusa Pacific University

Teresa Dodd-Butera

Ph.D., RN/DABAT, School of Nursing, Azusa Pacific University

Research Objectives: Autism spectrum disorder (ASD) is a complex neurodevelopmental disability that negatively affects approximately one in 44 children eight years old in the United States. Long-term daily

demands of caring for children with ASD may exert significant psychological and emotional distress on parents, which may further impact their perceived self-efficacy in providing care. This study aimed to examine whether and the extent to which children's health-related stressors serve as predictors of parental stress appraisal and self-efficacy in caring for children diagnosed with ASD in middle childhood.

Methodology: A retrospective, cross-sectional secondary data analysis study was conducted using the 2019-2020 National Survey of Children's Health from the U.S. as the principal data source.

Findings: In 2019 and 2020, 3.1% of US children aged 6-11 had a current diagnosis of ASD (N = 694); 49.1% with mild severity, 40.2% with moderate severity, and 10.8% with severe ASD. Results showed strong correlations between parental stress and perceived self-efficacy, and between children's health-related factors and parental stress levels. Structural equation modeling further revealed that children's general health status and severity of ASD are significant predictors of parental stress, which in turn predicts 23.5% of the variance in parental self-efficacy (chi-squared = 6.01, df = 2, p = .05; CFI = 0.99; RMSEA = 0.05, 90% CI = [0.05, 0.08]).

Research Outcomes: The actual impact of an external stressor (e.g., having a child with ASD) on parents' self-appraisal of caring for their children is mediated by parents' primary appraisal of the stressor (e.g., parental stress).

Future Scope: Future research should explore how family relationships and emotional/spiritual support could moderate the impact of child health-related parental stress on their perceived self-efficacy. Such understanding could further inform the design of effective well-being interventions for parents and caregivers who struggle with caring for children with ASD.

Keywords: Self-Efficacy, Parental Stress, Autism Spectrum Disorder, Middle Childhood

FG4592 Plays a Beneficial Role in Ischemic Stroke by Multiple Targets



Jian Xie

Department of Neurology, Southeast University, Nanjing, China

Yuan Zhang

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Bin Lib

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Wen Xib

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Yu Wangb

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu,

China

Lu Lib

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Chenchen Liub

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Ling Shenb

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Bing Hanb

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Yan Kong

Department of Biochemistry and Molecular biology, school of Medicine, Southeast University, Jiangsu, China

HongHong Yaob

Department of Pharmacology, School of Medicine, Southeast University, Nanjing, Jiangsu, China

Zhijun Zhang

The Brain Cognition and Brain Disease Institute of Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, Guangdong, China

Abstract: Background: Acute ischemic stroke is a significant global burden of neurological diseases but lacks effective strategies, except for reperfusion treatments. The hypoxia-inducible factor (HIF) prolyl hydroxylases (PHDs) participate in the pathophysiological process of ischemia. In the past two decades, some researchers have sought to determine the neuroprotective function of preclinical PHDs inhibitors in stroke models.

Purpose: However, whether FG4592, the first clinically approved PHDs inhibitor, can alleviate ischemic injury is still undetermined.

Methods: In this study, FG4592 was used to treat mice after transient or permanent ischemic stroke, and the infarct volume and neurological behaviour of mice were tested. The potential neuroprotective mechanisms of FG4592 were further explored.

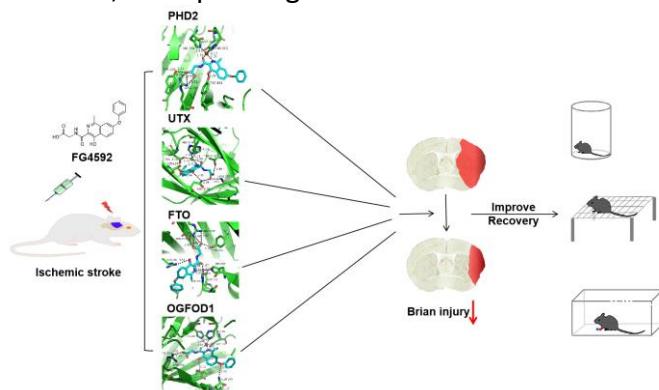
Finding: In present study, the post-treatment of FG4592 decreased the infarct volume and improved the neurological defects after the transient or permanent ischemia. Meanwhile, the delayed administration of FG4592 also showed neuroprotective function in alleviating brain infarct volume. As the classical pharmacological effects, FG4592 upregulated the HIF signal pathway in the peri-infarct area of mice 24 h after reperfusion. Moreover, FG4592 activated the autophagy flux pathway and alleviates apoptosis after I/R injury. Furthermore, With the help of online prediction and molecular docking, multiple 2OG-

dependent non-heme iron dioxygenases were found to be potential targets of FG459.

Research Outcomes: This study provides crucial evidence that the first approved PHDs inhibitor, FG4592, can prevent brain injury and improve the recovery of neurological defects in mice after transient or permanent ischemic stroke, which may be mediated by multiple targets.

Future Scope: The definite mechanisms of potential targets need to be explored in further studies.

Keywords: FG4592, Ischemic Stroke, Multiple Targets



Pushen Capsule Treatment Promotes Functional Recovery After Ischemic Stroke

Yuan Zhang

Pharmacology, Southeast University, Nanjing, China

Jian Xie

Pharmacology, Southeast University, Nanjing, China

Lu Lia

Pharmacology, Southeast University, Nanjing, China

Wen Xia

Pharmacology, Southeast University, Nanjing, China

Bin Lia

Pharmacology, Southeast University, Nanjing, China

Ying Baia

Pharmacology, Southeast University, Nanjing, China

Honghong Yaoa

Pharmacology, Southeast University, Nanjing, China

Bing Han

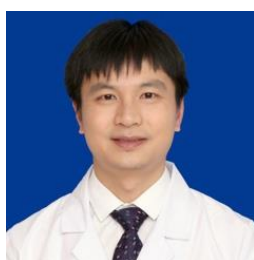
Pharmacology, Southeast University, Nanjing, China

Abstract: As a leading cause of long-term disability, ischemic stroke urgently needs further research and

drug development. Traditional Chinese Medicine (TCM) has been used for the treatment of various diseases for a long time in China and has increasingly attracted worldwide attention due to its efficacy and low side effects. In this study, we focused on the Chinese compound medicine Pushen capsule (Pushen) and found several effects on mice stroke models, including reducing the infarct volume, improving the blood–brain barrier, and promoting functional restoration. Furthermore, TCM network pharmacology analysis was performed, and quercetin, tricin, luteolin, physcion, and kaempferol were identified as the key active ingredients in Pushen that treated ischemic stroke. Mechanistically, in the brain, these key ingredients could bind with the transcription factor c-Myc and thereby regulate the expression of Adora2a, Drd2, and Ppp1r1b, which are enriched in the cAMP signaling pathway. Additionally, integrated analysis of the intestinal flora by 16S rDNA sequencing and serum metabolomics analysis indicated that long-term administration of Pushen reversed the dynamic changes in intestinal flora structure after ischemic stroke. Taken together, our study confirmed that Pushen was effective for treating ischemic stroke and has promising for clinical applications.

Keywords: Traditional Chinese Medicine (TCM), Ischemic Stroke, Pushen Capsule, Functional Recovery, C-Myc

Effect of Mobile-Based Cbt on Ldl in Ascvd: Protocol for A Multicenter, Randomized Controlled Trial



Wen Bin Zhang

Key Laboratory of Cardiovascular Intervention and Regenerative Medicine, Zhejiang University School of Medicine, Hangzhou, China

Au Xu Lin Hong

Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, Zhejiang, China

Yi Luan

Sir Run Run Shaw Hospital, Zhejiang University, Hangzhou, Zhejiang, China

Hong Ying Liu

Hangzhou Kang Sheng Health Consulting CO., LTD

Abstract: Research Objectives: The objective of this trial is to compare the low-density lipoprotein cholesterol (LDL-C) outcome in atherosclerotic cardiovascular disease (ASCVD) patients receiving mobile device-based cognitive behavior therapy (CBT) to conventional interventions.

Methodology: This trial is designed as a multicenter, prospective randomized controlled trial with a 6-month follow-up. Mean LDL-C level and the percentage of different LDL-C levels, General Self-Efficacy Scale (GSEs), quality of life index (QL-index), etc., between the two groups at baseline, 1, 3, and 6 months will be measured.

Findings: This trial should demonstrate that the implementation of mobile-based CBT intervention will be potentially effective in lowering LDL-C levels in ASCVD patients.

Research Outcomes: In patients with ASCVD receiving standard treatment, the efficacy of mobile-based CBT intervention will be compared with conventional interventions, including changes in objective parameters of LDL-C levels. The differences in self-efficacy and quality of life between the two groups will be measured by scales and questionnaires.

Future Scope: The novel mobile-based intervention is expected to reduce LDL-C level at a population level due to the high accessibility and availability of technologies. Moreover, this CBT treatment can potentially fill the existing gaps of limited professional lifestyle interventions in ASCVD patients.

Keywords: ASCVD, LDL, Mobile-based, CBT

Challenges in Nigeria Health System and The Need for Integrating Adequate Medical Intelligence and Surveillance System

Mr Akinniyi Odeleye

Cardiology, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria

Abstract: Objectives: As an important element of National Security, Public Health is not only functions to provide adequate and timely Medical Care but also track, monitor and control disease outbreak. The Nigerian health care had suffered several infections disease outbreaks year after year. Hence, there is need to tackle the problems. This article aims to review the state of Nigeria health care system and to provide possible recommendations for the Nigerian health care system, this article also aims at reviewing the dynamics of health care in the limited states, Britain and Europe with regards to methods of Medical Intelligence/Surveillance.

Materials and Methods: Medical Intelligence and Surveillance represent a very useful component in the health care system and control diseases outbreak, bio attack, Covid-19, Ebola, Laser-fever e.t.c. There is increasing role of automated-based medical Intelligence and Surveillance system, in addition to the traditional manual pattern of document retrieval in advance medical setting such as those in Western and European Countries.

Conclusion: Nigerian health care system is poorly developed. No adequate and functional surveillance system are developed. To achieve success in health care in this modern era, a system well-grounded in routine surveillance and medical intelligence as the backbone of the health sector is necessary, besides adequate Management Couple with Strong Leadership Principles.

Effect of High-Intensity Interval Training on Cardiovascular Function in Postmenopausal Women



Jia Song

Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Mai Chen

Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Wanlin He

Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Bing Ruan

Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Abstract: Objective: The purpose of this study was to investigate the effect of HIIT on cardiovascular function in postmenopausal women.

Methods: A systematic literature search was conducted in PubMed, Web of Science, Cochrane and Embase, for up to January 1, 2023. Studies were included if they considered postmenopausal women, examined the effects of HIIT on at least one measure of heart rate at rest (HRrest), blood pressure, blood lipids and glucose, and was Randomized controlled trial. Studies were excluded if they were not written in English, their subjects had cancer or metabolic diseases, or articles didn't have extractable data. Two investigators independently assessed methodologic quality using the PEDro scale. Preintervention and postintervention sample sizes, means, and standard deviations of PROs were extracted.

Results: A total of seven studies that were included in the analysis. The mean quality scores obtained after evaluation of each trial included in our meta-analysis was 6.29. Most of the studies were of high quality, having a score above seven points. HRrest dropped in the HIIT group (MD=-3.02, CI: -5.73 to -0.32, p=0.93, I2=0), and HDL went up (MD=0.19, CI: 0.03 to 0.35, p=0.77, I2=0). In SBP (MD= 4.63, 95% CI: 0.04 to 9.22, p=0.89, I2 = 0%), DBP (MD=3.20, 95% CI:0.32 to 6.09, p=0.92, I2=0%), glucose(MD=-0.03, 95% CI: -0.20 to 0.15), p=0.32, I2=1%) and blood lipids (except for HDL) , there was no significant difference between the HIIT group and the control group.

Conclusion: Based on these results, it appears that HIIT can significantly improve cardiovascular function in postmenopausal women in some ways such as HRrest and HDL, however, the evidence that HIIT improves cardiovascular related problems in postmenopausal women may be insufficient, and more studies are needed to confirm whether HIIT can effectively improve other cardiovascular functions.

Keywords: High Intensity Interval Training, Postmenopausal, Cardiovascular Function

Effectiveness of Telerehabilitation Versus Face-To-Face Rehabilitation in Subjects Treated with Shoulder Arthroscopy: A Systematic Review and Meta-Analysis

Hailong Yang

School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Xiao Hou

School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Bing Ruan

School of Sports Medicine and Rehabilitation, Beijing Sport University, Beijing, China

Introduction: Shoulder arthroscopy has become the primary treatment modality for many shoulder disorders due to the unique advantages [1]. And rehabilitation after surgery is crucial. Compared with traditional in-person rehabilitation, telerehabilitation has advantages in the accessibility and convenience of access to physical therapy [2]. Previous study has shown the effectiveness of telerehabilitation in many musculoskeletal pain conditions [3]. Thus, telerehabilitation may have similar effects on shoulder function

and patient-reported outcomes as traditional rehabilitation in subjects treated with shoulder arthroscopy. To confirm the hypothesis, we conducted this systematic review and meta-analysis.

Methods: Six databases consisting of PubMed, Web of Science, CNKI, Cochrane Library, PEDro, and Embase before January 2023 were searched. Independent reviewers selected randomized controlled trials that compared the effects of telerehabilitation with face-to-face treatments in individuals with shoulder arthroscopy. Patient-reported outcomes (PROs), range of motion (ROM), motor function, and adverse events were reported. Effect size of PROs and motor function was synthesized using the standardized mean difference (SMD) with a 95% confidence interval (CI). Effect size of ROM was synthesized using the weight mean difference (WMD) with a 95% CI.

Results: A total of 58 data points (covering 2611 individuals) from 7 studies were included in this meta-analysis. Our results showed that the difference between the effect of telerehabilitation and face-to-face rehabilitation on ROM (abduction: WMD = -2.02, 95% CI = -7.85 to 3.81, $p = 0.50$, $I^2 = 54\%$; flexion: WMD = 1.02, 95% CI = -1.11 to 3.15, $p = 0.35$, $I^2 = 22\%$; external rotation: WMD = -1.19, 95% CI = -4.16 to 1.77, $p = 0.43$, $I^2 = 0\%$) was not significant. Additionally, the difference between the effect of telerehabilitation and face-to-face rehabilitation on patient-reported outcomes (SMD = -0.12; 95% CI = -0.30 to 0.06; $p = 0.020$; $I^2 = 66\%$) and motor function (SMD = -0.19; 95% CI = -0.57 to 0.19; $p = 0.34$; $I^2 = 0\%$) was also not significant.

Conclusion: Both forms of rehabilitation have similar effects on improving patient-reported outcomes, ROM, motor function. Hence, telerehabilitation appears to be another option for patients after shoulder arthroscopy.

Reference: [1] Paxton E S, Backus J, Keener J, et al. Shoulder arthroscopy: basic principles of positioning, anesthesia, and portal anatomy[J]. The Journal of the American Academy of Orthopaedic Surgeons, 2013, 21(6): 332–342. [2] Mahmoud I A M S. Usability of Telemedicine in Physical Therapy Rehabilitation: Systematic review. [J]. JMIR rehabilitation and assistive technologies, Canada: 2021. [3] Valentijn P P, Tymchenko L, Jacobson T, et al. Digital Health Interventions for Musculoskeletal Pain Conditions: Systematic Review and Meta-analysis of Randomized Controlled Trials[J]. Journal of Medical Internet Research, 2022, 24(9): e37869.

In Recent Years, Bangladesh Has Suffered from an Increase in Breast Cancer

Md. Al Hasibuzzaman

Institute of Nutrition and Food Science, University of Dhaka, Dhaka, Bangladesh

Abstract: In Southeast Asia, women are could not get breast cancer care still now. Because no national-level hospitals are working on this. Most breast cancer diagnoses are each year in Bangladesh are based on lumps. No information of awareness in the breast cancer screening process. Avoiding the breast cancer screening process are many causes like religious believes, cultural barriers. Although Bangladesh's 6th most reason of death is cancer. The cancer-related death rate is 7.5 percent in 2015 and it will increase to 13 percent by 2030. Bangladesh also have shortage of radiotherapy machine, trained oncologist and cancer related research. About 66% percent of patients are from 30 to 65 years old. There are many causes of breast cancer in Bangladesh. Mostly are delay first children, less than 18 years old with BMI 25 kg/m² are the significant risk factor of breast cancer. Most studies to date suggest that being overweight and obesity are associated with a lower risk of premenopausal breast cancer but are associated with a greater risk of postmenopausal breast cancer. Weight gain in adulthood appears to be associated with an increased risk of postmenopausal breast cancer. Overweight and obesity in adulthood and in particular weight gain during early adulthood may play an important role of breast cancer.

Keywords: Cancer, Breast Cancer, Bangladesh Cancer

Impact of Role Ambiguity and Occupational Stress on Nurses' Job Satisfaction

Yumna Ali

Psychology, Hazara University, Mansehra, Pakistan

Abstract: Aim: To measure role ambiguity and occupational stress on nurses' job satisfaction.

Study Design: Cross sectional survey; Convenience sampling.

Methods: Sample of 240 nurses were drawn from private and public-sector hospitals. Role ambiguity (Rizzo, House, & Lirtzman, 1970), Occupational Stress (Yang, Wang, & Chi, 2011) and Job satisfaction (Carbonell & Escudero, 2013) were used as instruments of measurement.

Results: Role ambiguity with estimate of 0.039 had no significant effect on job satisfaction. Occupational stress with estimate of -0.058 has no significant effect on job satisfaction.

Practical implication: Conclusion: The study is integral to have in the field of occupational health psychology and to make sure that nurses are satisfied in their work whether employed in private or public hospitals.

Keywords: Role Ambiguity, Occupational Stress, Job Satisfaction, Nursing

LISTENERS

Dr David Deutsch Basel Heights Medical Center, Maccabi Health Organization, Tel Aviv, Israel ERCICRLSH2301053
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