

## Chapter II

### Review of Literature

**“Nurses dispense comfort, compassion, and caring without even a prescription”**

**- Val Saintsbury.**

The present chapter focus on the studies related to the research under investigation. Review of literature identifies, evaluates and synthesises the related field of research. It clarifies how knowledge has evolved within the field. In the present chapter it is clearly stated into thematic paragraphs to systematically and grouped into the following manner.

- 2.1. Studies on test anxiety
  - 2.1.1. Studies on test anxiety and intervention.
- 2. 2 Studies on stress among nursing students.
  - 2.2.1 Studies on Stress and intervention.
- 2.3. Studies on achievement motivation.
- 2.4. Studies on cognitive behaviour therapy.

#### **2.1 Studies related to Test anxiety among nursing students**

Dodson (2021) explained that test anxiety in nursing students is a common problem that greatly affects individual performance in nursing school. The purpose of this quasi –experimental evidence –based practice improvement project is to reduce test anxiety in nursing students through mindfulness practices. A convenience sampling of approximately 40 students from the first semester cohort of a Midwestern university pre-licensure nursing program participated. Data analysis of pre and post intervention scores demonstrated a significant decrease in test anxiety post – intervention.

Liu, Pan, Yang, Wang, Rao, Zhang, and Pan (2021) investigated the links between psychological resilience, emotion regulation and test anxiety in addition to exploring the differences about socio demographic factors. A sample 1266 students was selected through cross-sectional survey from medical university in china during 2019. Data were obtained by network technique using designed questionnaire, which assesses the level of test anxiety, emotion regulation and psychological resilience respectively. Results revealed

medical students experienced test anxiety at different levels, 33.7% of these were seriously. It revealed significant effects of the gender and academic performance on test anxiety. Results logistic regression indicated that test anxiety was significantly associated with emotion regulation and psychological resilience ( $P < 0.01$ ). Psychological resilience played a mediating role on the relationship between emotion regulation and test anxiety. These findings highlight the importance of psychological resilience relates to test anxiety in medical students. Resilience training intervention may be developed to support students encountering anxiety during the exam.

Park and Byun (2021) stated the effect of perceived stress, self-esteem and major satisfaction on test anxiety in nursing students and to provide the basic data of control test anxiety. Data was collected from 251 nursing students in B city and analysed by t-test, ANOVA, Pearson correlation and multiple regression was analysed. There was significant difference in test anxiety with respect to gender. There was positive correlation between test anxiety and perceived stress, negative correlation was found between test anxiety and self-esteem. The factors affecting the test anxiety of the study subjects were perceived stress. Through this research can be used as basic data by identifying factors affecting test anxiety of nursing students.

Abeasi and Agyei (2021) study explained the examination anxiety level of students of nursing and Midwifery College, Agogo and Presbyterian University College and evaluate the factors affecting them. A total 160 undergraduate nursing students comprising 80 degree and 80 diploma students were conveniently sampled for the study. The study was conducted using a descriptive cross-sectional design. The Westside test scale was used to measure examination anxiety among the participants. A researcher -designed questionnaire in which participants respond to a three-point likert scale was used to assess factors influencing examination anxiety. The findings of the study showed that test anxiety was higher among the diploma the diploma candidates than the degree candidates. The factors found to influence examination anxiety among students were volume of materials to study, level of preparation, perceived difficulty of question and myth about examination. The perceived importance of the examination and schedule of the exams did not influence examination anxiety. The conclusion of the study was that candidates of the licensure examination organised by nursing and midwifery council of Ghana should be assessed for test anxiety and offered the necessary psychological support where necessary.

Farcasiu, and Andrei (2021) study explored the prevalence of test anxiety, gender difference variables that moderate it among students of Dentistry Department, Oradea university, Romania. Spielbergers test anxiety inventory (TAI) adopted. The sample consisted of 201 undergraduate students (56 males, 27.86%) out of 360 students. The large majority of students presented high level of anxiety.

Lohiya, Kajale, Lohiya, Khadilkar, Khadilkar, Gondhalekar, and Agarkhedkar (2021) investigated to assess test anxiety (TA) and factors affecting Test Anxiety in school-going children. To observe the impact of TA on quality of life (QOL). Indian school children 9 to 18 year old were the students. Children were administered Test Anxiety Inventory (TAI) and Peds QL (Paediatric Quality of life). TAI Score (factors affecting it in both rural and urban children) and QOL scores were assessed. Data on 2158 children were analysed (1162 boys). Girls and rural children had higher TA. Two-thirds of children studied had moderate to high TA. Increasing age, urban living, QOL and maternal education had an impact on TA. Evaluating TA and developing appropriate strategies for stress-reduction in school children is necessary.

Naeim, Rezaeisharif, Zandian (2020) stated the relationship between internet addiction and social adjustment and test anxiety among the female students of Aradabil university of medical sciences. The sample consisted of 349 students were selected by simple random sampling. The results showed that there was a significant positive correlation between internet addiction and test anxiety. There is also an inverse correlation between social adjustment and test anxiety. It can be concluded that the level of test anxiety in students can be controlled through the necessary training to make better use of the internet and prevent it addiction.

Shukla, Gajpal, Jha and Mitra (2020) were to investigate academic achievement in relation to study habits, test anxiety and gender. The study sample consisted of 80 students (36 boys and 44 girls) were selected randomly from Baloda Bazaar District. Study habit inventory (Mukhopadhyaya and Sansenwal, 2005) and test anxiety questionnaire (Nist and Diehl, 1990) were used for data collection. The results indicate that there is a three dimension (Recording, Interaction, Task orientation) positive relationship with academic achievement of students and test anxiety. Gender of students is not likely to have any major effect on academic achievement of students.

Ahmad, Hussaine and Khan (2018) investigated undergraduate students test anxiety, to measure the correlation between undergraduate students test anxiety with their academic achievement, and to measure the correlation of undergraduate students test anxiety from the perspective of their gender. Students of eight departments at university of swat constituted the study sample. Among these, 126 undergraduate level students were selected through simple random sampling. The tool used for the study was West Wide Test Anxiety scale. Analysis data was done using SPSS Version 21. Moderately high-test anxiety was found in undergraduate university students which was similar in both male and female students. Female students showed better performance as compared to male students.

Balogun, Balogun and Onyencho (2017) investigated the role of achievement motivation in the relationship between test anxiety and academic performance. Three hundred and ninety-three participants (192 males and 201 females) selected from a public university in Ondo state, Nigeria using a purposive sampling technique participated in the study. Results showed that test anxiety had a negative impact on academic performance. Also achievement motivation significantly moderated the relation between test anxiety and academic performance. The findings suggest psycho-education intervention.

Numen and Hasan (2017) explained the effects of study habits on test anxiety, academic achievement of undergraduate students. A purposive sample comprised of 180 undergraduate students (84 boys and 96 girls) was drawn from public university. Multivariate analysis indicated that study habits have a significant effect on test anxiety and academic achievement. The findings revealed that students having effective study habits experience low level of test anxiety and perform better academically than students having ineffective study habits. It was also indicated that girls experience higher level of test anxiety as compared to boys. Correlation analysis indicated significant positive relationship between study habits and academic achievement and test anxiety was negatively correlated with academic achievement and study habits. These findings highlighted the need to improve study habits of undergraduate students in order to overcome test anxiety.

Duraku (2017) stated the difference in test anxiety among Bachelor and Master level students at the Department of Psychology, University of Prishtina by identifying the most common factor influencing test anxiety changes. The first research question was aim

to examine difference in test anxiety across levels of study, while the second research question aims to identify the most influential factors which impact the reduction or increase of test anxiety level on the abovementioned students. The measuring instrument consists of an online survey distributed to a sample of (N=59) students. According to the study, undergraduate students reported significantly higher levels of test anxiety compare to graduate students. Regarding the anxiety reduction factors Masters Students have reported a high level of confidence, study skills, receiving good grades and prior information gained compared to undergraduate students. With regard to anxiety increasing factors, Bachelor level students tended to cite lack of preparation, fear of failing, family responsibilities, characteristics of the professor and exam, lack of time management skills and lack of study skills as factors related test anxiety as compared to Masters students.

### **2.1.1. Studies on Test Anxiety and Intervention**

Putwain and Embse (2020) Cognitive Behavioural Intervention have been shown to be effective treatment for Test Anxiety study evaluated a six session Cognitive Behaviour Intervention for anxiety in a sample of secondary school student aged 14-16 years preparing for high stakes examinations. Test Anxiety showed a large reduction following Intervention compared to control group participants who showed a moderate reduction.

Ganaprakasam and Selvaraja(2020)were aimed at examining the effectiveness of cognitive behavioural group therapy in alleviating Test Anxiety among primary school students. The study employed one –group pre-test and post-test design. Findings revealed reduction in Test Anxiety scores among the respondents who have received cognitive behavioural group therapy.

Ugwuanyi et al., (2020) determined the effect of cognitive behavioural therapy (CBT) with Music in reducing physics test anxiety among secondary school students as generalized test anxiety scale pre-test, post-test randomized control trial experimental design was adopted in this study. The treatment group was exposed to a 12week CBT-MUSIC program. The results showed a significant effect of CBT with MUSIC in reducing physics Test Anxiety among secondary school students.

Agah, Ede, Zudonu, Asor and Onyishi (2020) tested the efficacy of the fear model of Cognitive Behaviour Therapy in treating Test Anxiety in chemistry students. They adopted a randomized pre-test and post-test trial experimental design. The researcher

concluded that FEARModel of Cognitive Behaviour Therapy is efficient in the reduction of Test Anxiety among undergraduate chemistry studies in public universities.

Son and Kim (2019) conducted a study among nursing students. They often experience Anxiety and stress when taking exams that test their fundamental nursing skills. The results suggest that nursing education that includes aromatherapy combined with music therapy may be effective for improving the skills and reducing Anxiety and Stress among Nursing Students.

Krispens, Gort, Schultke and Dickhauser (2019) studied the effects of an inquiry – based stress reduction. (IBSR) Intervention on student Academic Self –Efficacy, their Test Anxiety and subsequent procrastination in the final stage of an academic term – longitudinal quasi –randomized intervention control trial. Findings provide preliminary evidence that IBSR might help individuals to cope with their Test Anxiety and Procrastination.

Shen, Yang, Zhang and Zhang (2018) explore the effect of Expressive Writing of Positive Emotions on Test Anxiety among Senior-High School students. Long term expressive Writing of Positive Emotions appears to help reduce Test Anxiety by using insight and positive emotion words for Chinese students. Efficient and effective intervention programs to ease Test Anxiety can be designed based on this study.

Kaur, Thapar, Saini and Mishra (2017) were aimed to assess the effectiveness of Guided Imagery on Test Anxiety among nursing students. Guided Imagery as an intervention in the form of audio tape for 30 minutes was to experimental group. It was found that improved anxiety level among Nursing students after Guided Imagery( $P=0.0001$ ).

Shahidi, Akbari and Zargar (2017) aimed to explain the Effectiveness of Mindfulness based Stress (MBSR) Therapy on emotion regulation and Test Anxiety of students and test the remaining effect of this treatment after 3 months. Participants randomly divided into experimental and control groups. The Study findings were analysed using analysis of variance with repeated measures. The results indicated that the effect of MBSR Lasted through the follow –up for both these variables.

Lothes, Wilsom, Mochrie, and Hakan (2017) assessed the effects of over-all Test Anxiety reduction through the use of Dialectical Behaviour Therapy's (DBT's)

Mindfulness skills an eightweek period among college students. Mindfulness intervention that specifically teaches about the “what” and “How” skills of DBT can help students reduce not only Test Anxiety, but overall Anxiety.

Hullu, Sportel, Nauta, and Jong (2017) evaluated the long-term outcomes of two early intervention that aimed at reducing social and Test Anxiety in young adolescents at risk for social anxiety disorder. In thesis RCT, moderately socially anxious adolescents (N=240 mean age 13.6years) were randomly assigned to a 10 week internet –based multifaceted cognitive bias modification training (CBM) a 10 week school based Cognitive Behavioural group training (CBI) or no intervention control condition. This RCT does not support the longer term efficacy of school based CBT or CBM as early intervention for school and Test Anxiety. Rather it emphasizes the positive natural course of highly socially anxious adolescents over two years.

Cho, Ryu, Noh and Lee (2016) examined the effectiveness of daily mindful breathing practices on Test Anxiety of university students. A total of 36 participants were randomly assigned to one of three Conditions; training Mindful Breathing Condition (N-12) a training Cognitive reappraisal condition (contrast group, n-12) and Non training condition (control group n-12). The finding of this study suggests that both daily breathing and cognitive reappraisal practices were effective in reducing Test Anxiety; however Mindful breathing increased positive automatic thoughts to a greater extent than Cognitive development.

Rajiah and Saravanan (2014) were to analyse the effect of psychological intervention on reducing performance Anxiety and the consequence of the intervention on first year pharmacy students. Psychological intervention helped significantly reduce scores of Test Anxiety, psychological distress and lack of motivation and it helped to improve the performance of the students.

Afshariniya, Kakabaraee, and Amiri (2014) aimed a comparing the effectiveness of restructuring method on the reduction of Anxiety in the students of Islamic Azad university of Karmanshah branch. The research design was pre-test, post-test with control group. The experimental groups were instructed with of cognitive restructuring and Mindfulness methods in control group. The results showed that this two methods effective during one and therapy (two months later). Any significance difference in efficacy was not observed between the Cognitive restructuring and Mindful methods.

A biofeedback assisted relaxation training program was created to reduce Test Anxiety among nursing students by Prato and Yucha(2013). Participants were introduced to diaphragmatic breathing, progressive muscle relaxation and autogenic training. Autogenic training session was most effective in showing statistically significant change in decreased respiratory and pulse rates and increased peripheral skin temperature.

According to Nimati (2013) in an educational setting Anxiety is often experienced by students when taking a test which he called Test Anxiety. Study intends to investigate the effect of doing Pranayama on Test Anxiety and Test performance. Pranayama seems to have significant positive effect on Test Anxiety and Test Performance.

Lwazi (2013) investigated the effect of breathing techniques on Test Anxiety among students at the University of Zululand. The study consisted of the intervention group (N=60) and the control group (40). On the whole the intervention suggests the Breathing have a positive effect on test taking Anxiety.

Jain and Rubino (2012) attempted to determine the efficacy of single brief intervention –Emotional Freedom Techniques (EFT) to support participant's ability to shift attention appropriately to achieve optimal levels of both Test Anxiety and Test Performance. Group 1 learned EFT, Group 2 learned Diaphragmatic breathing (DB) and Group 3 no treatment, control. Subsequent analyses of variance revealed significant importance in the both the DB and EFT group on most measure, with gains maintained in follow up.

Ejei, Razaeei and Lavasani (2011) investigated the effectiveness of coping strategies training the irrational beliefs (cognitive approach) on Test Anxiety of students in one graders of high school. The sample consisted of 60 students who were selected randomly according to multistage sampling method. Randomly assigned to experimental and control groups. Repeated measure analysis revealed that the effect OF coping strategies training process on decreasing Test Anxiety.

Eizadifard (2011) investigated the efficacy of Cognitive Behavioural Therapy accompanying with instruction of problem-solving skill, in reducing the Test Anxiety symptoms in female high school students. This study is experimental with pre-test, post-test design. The studied population was all the high school female students of first to third grade Feraydoon Kenar, Mazandaran. The experimental group was receiving Cognitive

Behavioural Therapy with problem solving skill instruction for 10 seconds while the control group did not receive any intervention. Results showed Test Anxiety symptoms in subjects of experimental group significantly reduced comparing with control group.

## **2. 2 Studies on stress among nursing students.**

Elazeem, Mohamed Ahmed and Nabawy Abo Zeid (2023) investigated the relationship between nursing students' perceptions of stress, resiliency, and problematic mobile phone usage at the nursing faculty at Benha University. Nearly half (42.4%) of the nursing students studied noticed moderate stress, nearly half (49.2%) had moderate resilience, and over two-thirds (60.4%) had high problematic usage of mobile phones. A highly statistically significant positive correlation existed between problematic mobile phone use and perceived stress, while a highly statistically significant negative correlation existed between total resilience and both perceived stress and problematic mobile phone use. The study recommended immediate intervention, a stress management programme.

Hansen,Olsen, Brynhildsen and Leonardsen (2023) examined (1) nursing students' perceived stress, self-efficacy, control, and evaluation before and after simulation as part of a structured course in physical assessment, (2) whether factors such as gender, age, or previous work experience were associated with perceived stress during simulation, and (3) nursing students' evaluation of the course. The results revealed students tension before the simulation, but a lower level of activation, a more positive mood, a greater sense of control, and self-efficacy after the simulation.

Martin et al.,(2022) explored perceived stress and measures of well-being (self-compassion,happiness, and life satisfaction) along with self-reported health promoting behaviours and health status in affect stress and wellbeing in nursing students. Baccalaureate nursing students from Texas participated in a web-based survey.More than half (56.6. %) of students reported worsening health since starting nursing school. Targeted interventions to improve well-being among students may be necessary and would fit with national recommendation for nursing education programmes

. Ayaz-Alkaya and Simones (2022)compared stress, coping behaviour of nursing students in two different countries. The sample consisted of 986 students in total (807 students from turkey and 179 students from the United States).Datawere collected by a questionnaire using the nursing education stress scale and the coping behaviour inventory.

Turkish students were significantly higher than the United States students ( $p < 0.005$ ). Where mean score of the optimistic coping behaviour sub group of the scale of Turkish students were lower ( $p < 0.05$ ). This study revealed that the nursing students from different countries had different stress level in nursing education. The most used coping strategies by the nursing students from two countries were avoidance and problem-solving behaviour.

Bhurtun et al., (2020) explored changes in stress levels and coping strategies among nursing students at clinical environment. Nursing students ( $N=131$ ) were followed during their first and second study year. Descriptive statistics and paired sample t-test used to measure changes in the variables within the same cohort. Nursing students perceived more stress in their second clinical practice compared to first one, with mean score of 1.03 and 1.66 respectively. Stress from lack of professional knowledge and skills remained the main stress factor while transference was the main coping strategy across the two study years. Nursing educators should support nursing students to develop effective coping strategies from clinical stressors such as lack of professional knowledge and skills and prepare their students mentally for clinical placement.

Kupcewicz, Grochans, Kadučáková, Mikla and Óźwik (2020) examined relationship between stress intensity and coping strategy and the quality of life of nursing students in Poland, Spain and Slovakia. Most of the surveyed students rated their stress intensity over the last month as moderate or high. Comparison of the results of the stress levels in relation to the country of residence did not reveal statistically significant differences.

Ahmed and Mohammed (2019) explored degree of stress experienced by nursing students at Albaha University, KSA and the coping strategies they subsequently employ. Noise, social interaction, and personal illness were main stressors. The main stressors were noise, moving location. Social interaction and personal illness (seven; 5.6%). The perceived stress provoking factors included taking care of patients, assignments and workload, lack of professional knowledge and skills, field of practice, peers and daily life and teachers and nursing staff at hospitals. The strategies used by students to minimise stress included taking a problem-solving approach staying optimistic, transference, and avoidance.

Yıldırım, Karaca, Cangur, Acikgoz, and Akkus (2017) investigated the relationships between nursing students' education-related stress and stress coping, self-esteem, social support, and health status. The findings revealed that self-esteem and social support influenced nursing students' stress coping levels. Furthermore, this relationship appears to have an impact on overall health.

Bartlett, Taylor and Nelson (2016) explored the sources of stress among nursing students and to compare stress levels and selected mental health indicators between nursing students and the general student body. Nursing students were found to have significantly more stress, anxiety, sleep disturbances, and stress-related illnesses than the general student body.

Sun, Gao, Yang, Zang, and Wang (2016) evaluated the amount of professional identity and role stress among nursing students at the end of the first sub-internship, as well as the impact of professional identity and other variables on role stress. A cross-sectional study was the method employed. The level of role stress among nursing students was significant at the end of the first sub-internship. Students who valued their professional identities more exhibited lower levels of role stress. When compared to other personal factors, professional identity and education level had the greatest influence on nursing students' role stress. This is a novel viewpoint that suggests that nursing students may benefit from building and refining their professional identities.

Rathnayake and Ekanayaka (2016) study examined depression, anxiety and stress and associated factors among undergraduate nursing students in Sri Lanka. Depression, anxiety and stress are highly prevalent among undergraduate nursing students and correlations between these variables are positive. Self-rated physical health and self-rated mental health are the factors most closely related to negative emotional states. The improvement of mental health among nursing students is essential. The findings call for initiation of stress management interventions and increased counselling facilities for nursing students.

### **2.2.1 Studies on Stress and intervention**

Torné-Ruiz, Reguant, and Roca (2023) determined whether a mindfulness intervention delivered online is effective at lowering stress and anxiety in nursing students during clinical simulations. Stress and anxiety among nursing students are predicted to be

brought on by the clinical simulation. It needs to be controlled, hence actions must be taken. In the clinical simulation, the intense online mindfulness intervention that was proposed in this study decreased physiological markers, stress, and anxiety.

Varalakshmi and Trainer (2023) explored the impact of yoga on academic stress and academic achievement on a randomly selected sample of 60 girl students in the age group of 15-17 years living in rural areas of Ananthapur district of Andhra Pradesh. The findings of the study revealed that yoga practice has significant influence on academic stress and academic achievement of secondary school students.

Sultan, Amin and Khan (2020) was to determine the effectiveness of stress management training in reducing stress and developing emotional intelligence in university students. The intervention can be viewed as a feasible strategy for reducing stress and increasing emotional intelligence among students.

Lemay, Hoolahan and Buchanan (2019) investigated the effects of a six-week yoga and meditation intervention on college students' stress perception, anxiety levels, and mindfulness skills. Students experienced a reduction in stress and anxiety levels after completing a six-week yoga and meditation program preceding final examinations. Results suggest that adopting a mindfulness practice for as little as once per week may reduce stress and anxiety in college students.

Son, So and Kim (2019) examined the individual and combined effects of aromatherapy and music therapy on test anxiety, state anxiety, stress, and fundamental nursing skills among nursing students in Korea. The results suggest that nursing education that includes aromatherapy combined with music therapy may be effective for improving the performance of fundamental nursing skills and reducing anxiety and stress among nursing students.

Lin, He, Yan, Gu and Xie (2018) evaluated the effects of a modified mindfulness-based stress reduction (MBSR) program on the levels of stress, affect, and resilience among nurses in general hospitals in mainland China. The modified MBSR program is an effective approach for nurses to decrease stress and negative affect and improve positive affect and resilience. In addition, the program has the potential to improve job satisfaction.

Phang, Mukhtar, Ibrahim, Keng and Mohd. Sidik, (2015) examined effectiveness of the A 5-week mindfulness-based stress management (MBSM/Mindful-Gym) program in reducing stress among students in a medical school in Malaysia. Seventy-five medical students participated in the program. This study indicates that the program is potentially an effective stress management program for medical students in Malaysia.

Ratanasiripong, Park, Ratanasiripong and Kathalae (2015) investigated the efficacy of two brief intervention programs—biofeedback and mindfulness meditation—on levels of state anxiety and perceived stress in second-year Thai nursing students as they began clinical training. Findings indicated that biofeedback significantly reduced anxiety and maintained stress levels in nursing students. Mindfulness meditation similarly decreased anxiety levels, while also significantly lowering stress levels. The biofeedback group exhibited significant reduction in anxiety levels among the three groups at post intervention.

### **2.3. Studies on achievement motivation.**

Anttila, Lindfors, Hirvonen, Määttä and Kiuru (2023) examined how adolescent beliefs, behaviours, and temperament affect their dropout intentions in the first year of upper secondary school. Results show that high success expectations and low task avoidance decrease dropout intentions. Extraversion, negative affectivity, and effortful control also influence dropout intentions through success expectations. However, an increase in task avoidance mediates the relationship between extraversion and dropout intentions.

Mahdavi, Valibeygi, Moradi and Sadeghi (2021) examined the possible relationships between mental health, achievement motivation, and academic achievement and to study the effect of background factors on mentioned variables. The sample group consists of students of Kurdistan University of medical sciences. Our findings indicated that mental health is significantly correlated with achievement motivation ( $p < 0.001$ ), but has no correlation with educational success ( $p \leq 0.37$ ). Also, a significant relationship was observed between achievement motivation and academic achievement ( $p \leq 0.025$ ). Students who are more motivated to achieve their educational and academic goals, will be more likely to be successful in their education and have stronger academic performance.

Kusumawati, Fauziddinand Ananda (2023) examined how reward and punishment affect students' extrinsic motivation. The qualitative descriptive approach was utilised in the

study of the fourth grade homeroom instructors and three pupils at a state elementary school in Kumantan. The study's findings indicate that providing incentives and punishment has an effect on student development when done correctly and effectively.

Ali and Abdel Azeem (2022) analyzed the influence of self-management and self-efficacy among university students on their academic achievement. Additionally, the study explored the variations in the perceptions of self-management abilities and self-efficacy in academic achievement between Egyptian and Saudi students. The results of the study indicate that both self-management and self-efficacy have a positive impact on academic achievement in both countries. Moreover, self-management skills were found to enhance self-efficacy, which in turn greatly affects academic success. Lastly, the Multi-Group Analysis (MGA) showed no significant differences between Egyptian and Saudi students in terms of self-management, self-efficacy, and academic achievement.

Pambudi (2022) Study aimed to explore how implementing the Outdoor Learning in Mathematics (OLM) technique affects primary students' motivation and learning achievement in geometry. The research was conducted at a public elementary school located in Jember, East Java, Indonesia, using an experimental approach. The experimental group was taught geometry concepts with the OLM approach, while the control group received traditional teaching methods. The results indicated that students had a highly positive attitude towards the OLM approach and preferred it in primary schools. Additionally, the OLM technique boosted student motivation and improved their learning outcomes in geometry.

Quispe-Bendezú, Araujo-Castillo, García-Tejada, García-Tejada, Sprock and Villalba-Condori, (2020) investigated the association between academic procrastination and motivational attributions of performance in students in the seventh cycle of the EBR in the province of Arequipa. The findings indicate that the modified General Achievement Motivation Scale (EAML-G) is valid and reliable in identifying the causal attributions of general performance in secondary school pupils. The second study focused on determining the relationship itself, and it discovered that procrastination is inversely related to attributions to interest, capacity, task characteristics, and teacher evaluation in representative sample of 677 students aged 14 to 19, with an average age of 15.78, of which 476 were male and 201 female.

Partovi and Razavi (2019) Study was to determine the effects of Game-Based Learnings on the academic achievement and motivation of primary school children. The experimental group was exposed to Misha and Kosha Game-Based Learnings, whilst the control group received traditional instruction. The covariance analysis test (MANCOVA) demonstrated that the experimental group had considerably higher ratings for academic achievement motivation than the control group. Furthermore, the results revealed that the computer educational game influenced the academic achievement motivation of primary kids. According to the findings, computer-based games are necessary for primary school kids.

Steinmayr, Weidinger, Schwinger, and Spinath (2019) investigated whether the reported previous findings can be replicated when ability self-concepts, task values, goals, and achievement motives are all assessed at the same level of specificity as the achievement criteria (e.g., hope for success in math and math grades). Relative weight analyses revealed that domain-specific ability self-concept, motives, task values and learning goals but not performance goals explained a significant amount of variance in grades above all other predictors of which ability self-concept was the strongest predictor.

Ebadi and Shakoorzadeh (2015) investigated the incidence of academic procrastination and its association with academic self-regulation and achievement motivation among high-school students in Tehran. The results of academic procrastination prevalence using descriptive statistics revealed that almost half of students procrastinate almost usually or always. The results also revealed that boys and girls postpone at the same rate in general. Boys are more than girls, delay solely on intellectual work. Regression study also revealed that academic self-regulation and achievement motivation strongly influence academic procrastination.

#### **2.4. Studies on cognitive behaviour therapy**

Chung, Lee, Au, Kam, Lee, Yeung, Ying Lau, Yan-Yee Ho and Ho (2023) Study evaluated the effectiveness of small-group nurse-administered cognitive behavioural therapy for insomnia (CBTI) as an early intervention of mood disorders with comorbid insomnia. Depression remission rate was 28.6%, 40.3%, and 59.7% at 3, 6, and 12-month, respectively in CBTI group and 28.4%, 31.1%, and 37.9%, respectively in no CBTI group. CBTI may be a useful early intervention to enhance depression remission and

reduce medication burden in patients with first-episode depressive disorder and comorbid insomnia.

Abbas, Latif, Ayaz Habib, Shahzad, Sarwar, Shahzadi and Washdev (2023) investigated the efficacy of Cognitive Behaviour Therapy (CBT) to treat depressive symptoms in patients with type 2 diabetes mellitus (T2DM) using experimental and waitlist control conditions. It is concluded that Cognitive Behaviour Therapy is an effective and promising intervention for depressive symptoms, diabetes distress, and health anxiety which also helps the person to promote quality of life, treatment adherence and physical activity.

Egbe, Ugwuanyi, Ede, Agbigwe, Onuorah, Okon and Ugwu (2023) investigated the effect of cognitive behavioural play therapy (CBPT) in reducing social anxiety disorders in school children with speech impairments. The study was conducted as a group-randomized control group trial involving 122 schoolchildren attending inclusive schools in Enugu state of Nigeria. The results showed that CBPT was significantly effective in reducing social anxiety disorders among children with speech impairments over time. On the other hand, no changes were observed among no-contact control group participants. Based on the treatment outcome, the study concludes that CBPT intervention is effective and significant in decreasing social anxiety disorders in children with speech impairments. This is great news for parents and educators who are looking for effective ways to help children with speech impairments overcome social anxiety and thrive in school.

Ritola, Lipsanen, Pihlaja, Gummerus, Stenberg and Joffe (2022) aimed to evaluate the effectiveness of a new 12-session internet-delivered cognitive behavioural therapy (iCBT) program for Generalized Anxiety Disorder (GAD) in nationwide routine care. The results showed that the nationwide, free-of-charge, therapist-supported HUS Helsinki University Hospital-iCBT for GAD was effective in routine care. However, further research is needed to establish its effectiveness against other treatments and optimize the design of iCBT for GAD for different patient groups and individual patients.

Wood, Kendall, Wood, Kerns, Seltzer, Small and Storch (2020) compared the relative efficacy of 2 cognitive behavioural therapy (CBT) programs and treatment as usual (TAU) to assess treatment outcomes on maladaptive and interfering anxiety in children with ASD. The secondary objectives were to assess treatment outcomes on

positive response, ASD symptom severity, and anxiety-associated adaptive functioning. In this study, CBT was efficacious for children with ASD and interfering anxiety, and an adapted CBT approach showed additional advantages. It is recommended that clinicians providing psychological treatments to school-aged children with ASD consider developing CBT expertise.

Nahman-Averbuch, Schneider, Chamberlin, Kroon Van Diest., Peugh and Powers (2020).study examined the changes in brain activation and resting-state connectivity after 8 weeks of CBT in youth with migraine.Alterations in brain function and Amygdalaconnectivity with areas involved in nociceptive processing, cognitive function, and emotional regulation may underlie the ability of CBT to aid in the prevention of headaches in migraine patient.

Jarvis, Padmanabhanunni and Chipps (2019) implemented and evaluated a low-intensity Cognitive Behaviour Therapy (LI-CBT) mHealth-supported intervention which targeted maladaptive cognitions in older people ( $\geq 60$  years) experiencing loneliness. The three-month intervention using WhatsApp was implemented with older people in four inner-city residential care facilities. The intervention included three components: technology acceptance, psycho-education, and individualized positively worded messages addressing maladaptive cognitions.At 1-month follow-up, even with a significant reduction in WhatsApp usage, a significant reduction in loneliness was maintained. LI-CBT delivered via instant messaging may be effective in reducing loneliness experienced by older people.

Freedland, Carney, Rich,Steinmeyer and Rubin (2015) determined the efficacy of an integrative cognitive behaviour therapy (CBT) intervention for depression and heart Failure self-care.A CBT intervention that targets both depression and heart failure self-care is effective for depression but not for HF self-care or physical functioning relative to enhanced UC. Additional benefits include reduced anxiety and fatigue, improved social functioning, and better health-related quality of life.

Blattman, Jamison and Sheridan (2017) recruited criminally engaged men and randomized one-half to eight weeks of cognitive behavioural therapy designed to foster self-regulation, patience, and a noncriminal identity and lifestyle. We also randomized \$200 grants. Cash alone and therapy alone initially reduced crime and violence, but effects

dissipated over time. When cash followed therapy, crime and violence decreased dramatically for at least a year. We hypothesize that cash reinforced therapy's impacts by prolonging learning-by doing, lifestyle changes, and self-investment.

Querstret, Cropley, Kruger and Heron (2016) evaluated the effect of a one-day CBT workshop on work-related rumination, chronic fatigue, and sleep quality. Participants who attended the workshop reported significantly lower levels of rumination and fatigue, but no significant differences in sleep quality. The workshop may help with recovery at work and outside of work, and adds to the recovery from work literature.