

In the Name of God



**Tehran University of Medical Science
International Campus
Nursing and Midwifery School**

Title:

**“Examining the general mental health of parents of children hospitalized in
Medical Centers affiliated to Tehran University of Medical Sciences in
2024.”**

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Nursing Master of Science (MSc) Degree”
In Tehran University of Medical sciences.**

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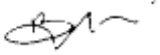
Thesis No:

1. Declaration

I **Bilkisu Kabir Said**, declare that all written materials in this thesis are the researcher's original work, except those materials which were used for the referenced citations in the text. It is being submitted for the Degree of Master of Science in Pediatric Nursing in the TUMS- IC. It has not been presented and will not be presented to any other university for a similar or any other degree award.

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Sign: Bilkisu Kabir Said



2. Dedication

○ *I dedicate this thesis to parents of hospitalized children*

○ *And to all those who strive for knowledge.*

○ *May it inspire perseverance and the pursuit of excellence!*

3. Acknowledgements

○ *Assalamu'alaikum warahmatullahi wabarakatuh, Alhamdulillah, foremost, I want to offer this endeavour to Almighty Allah for the wisdom he bestowed upon me, the strength, peace of mind and good health in order to finish this thesis.*

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4. Abstract

Introduction and Aim: Hospitalizing a child is highly stressful for parents and can cause serious mental health issues. This study aimed to determine the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences.

Methods and Materials: This cross-sectional quantitative study involved 405 parents of hospitalized children at Tehran University of Medical Sciences' affiliated children's hospitals, selected through convenient sampling. Data were collected using a valid and reliable Farsi version of the General Health Questionnaire (GHQ-28) and demographic questionnaires. Analysis was performed in SPSS version 16 using descriptive and inferential statistics, including independent t-test, One-way ANOVA, and univariate and multiple linear regression, with significance set at $p < 0.05$.

Results: The findings of the study indicated that the majority of participants were mothers (92.8%), predominantly married (99.0%), and primarily engaged in domestic roles. Approximately 37.8% held a diploma level education, while 70.9% reported having an average economic status and access to insurance coverage. Regarding the children, 55.6% were male, and a substantial proportion had a history of prior hospitalization. The leading causes for admission were seizures and congenital or acquired heart conditions. Statistical analysis revealed significant variations of the mean general mental health scores and their subscales across the different sociodemographic variables, including educational level, marital status, occupational role, economic status, and insurance coverage. Furthermore, multivariate analysis identified parental psychological disorders ($p = 0.04$), recent exposure to stressful life events ($p < 0.001$), and having only one child as significant predictors of poorer general mental health outcomes among parents.

Discussion and Conclusion: Parents of hospitalized children are at heightened risk for mental health challenges. The presence of social support and access to psychological services may alleviate psychological distress. Future research should explore the influence of socioeconomic and cultural factors on parental coping strategies and care needs. Additionally, employing randomized sampling methods is recommended to enhance the generalizability and robustness of findings.

Keywords: General Mental Health, Parents, Hospitalized Children, Quantitative Descriptive Research

5. List of Abbreviations

Abbreviation	
CDC	Centre for Disease Control and Prevention Recognizes
COVID-19	Coronavirus Disease
CICU	Coronary Care Unit
CBT	Cognitive Behavioural Therapy
COPE	Community Organization for Psychiatric Emergencies
CMC	Children Medical Centre
EPIS	Exploration Preparation Implementation, Sustainment
EBPS	Evidence Based Practices
FCC	Family Centred Care
HBM	Health Belief Model
HCCI	Hospitalized Children with Chronic Illness
HADS	Hospital Anxiety and Depression Scale
ICU	Intensive Care Unit
MPU	Mental Patient Union
NICU	Neonatal Intensive Care Unit
NSF	National Schizophrenia Fellowship
NAMH	National Association for Mental Health
NOH	Neonatal Open Heart
PICU	Paediatric Intensive Care Unit
PTSD	Post-Traumatic Stress Disorder
REBT	Rational Emotive Behaviour Therapy
RET	Rational Emotive Therapy
SDS	Self-Rating Depression Scale
SMOs	Social Movement Organizations
WHO	World Health Organization
ZT	Zito Trust

6. Glossary

Health	A state of being free from illness or injury.
Mental health	A person's condition with regard to their psychological and emotional well-being.
Depression	Is a common and serious medical illness that negatively affects how person feel, the way of thinking and how to act.
Anxiety	A feeling of fear, dread, and uneasiness.
Stress	A state of worry or mental tension caused by a difficult situation.
PICU	Paediatric intensive care unit is an area within a hospital specializing in the care of critically ill infants, children, teenagers, and young adults aged 0–18years old
NICU	Neonatal intensive care unit hospital ward or department equipped and staffed to provide intensive care to <u>dangerously</u> ill or <u>premature</u> new born babies
Parents	A person's father or mother.

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Chapter 1

Research Introduction

7. Chapter one

Introduction

Chapter overview

Chapter 1 introduces the research, highlighting the significance of the topic and gaps in existing studies. It then presents the problem statement and the study's rationale. Finally, it outlines the research objectives, questions, and definitions of main study's variables.

1. Introduction and Problem Statement:

Hospitalization of children may affect many in the healthcare system such as doctors, nurses as well as parents. Parents have experienced a wide range of physical, emotional, and psychological stress that could be recognized as early as 24 hours after admission and may continue to exist years after discharge. About 40% to 50% of parents with children admitted to neonatal intensive care unit NICU experience significant levels of depression, anxiety, and other psychosocial trauma (Abela et al., 2020). When a child is admitted to the hospital, it inevitably causes substantial anxiety for the parents. This anxiety is particularly acute during the administration of various nursing procedures. These procedures typically involve blood collection, infusions, injections, and other intensive medical treatments, which can be invasive and disturbing. The stress that parents experience is directly related to the nature of these medical interventions, as they grapple with the uncertainty of their child's well-being and the potential discomfort or pain that their child might endure (Pragholapati et al., 2020).

Furthermore, the pandemic-related limitations, a systematic review revealed that parents' distress over the short and long term was detrimental to the health of their children and those worried about job loss experienced greater levels of stress and poorer mental health (C. Fong and Iarocci, 2020). The Centre for Disease Control and Prevention (CDC) recognizes a significant relationship between the mental health of children and their parents. It posits that parents who struggle with mental health challenges, such as coping with symptoms of depression or anxiety, may find it more difficult to provide adequate care for their child compared to parents who report good mental health. Moreover, the presence of a caregiver with suboptimal mental health can have detrimental consequences on a child's overall well-being, encompassing mental, emotional, or developmental health, and may increase their risk of experiencing adverse childhood experiences (Okwori, 2022). Based on a systematic review conducted in Australia in 2021, it was found that between 12% and 27% of parents who had a child admitted to a paediatric intensive care unit (PICU) were diagnosed with post-traumatic

stress disorder (PTSD). Studies suggest that mothers are more likely to experience a higher rate of PTSD than fathers. The primary sources of stress for parents include changes in their parental role, marital challenges, balancing responsibilities towards other siblings, and managing financial difficulties and extended (Barnes et al., 2021).

Hospitalization in units such as PICU admission often causes the stress for parents, leading to significant levels of psychological distress. Numerous studies have assessed the psychological distress in parents of children with particular types of injuries, such as traumatic brain injury, burns, or traffic-related injuries, and have found that this distress tends to peak between 3 to 6 months post-traumatic distress (Foster et al., 2019, Foster et al., 2020, Griffin et al., 2024). Moreover, few studies have explored parent psychological distress in parents of child with burn injury. Parents of children with burn injuries often experience high levels of anxiety, depression, and poor sleep quality due to the perceived stress associated with their child's condition (Huo et al., 2024, Xu and Tang, 2023, Chen et al., 2022).

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being, emphasizing the significance of a holistic approach to health that goes beyond just the absence of diseases or infirmities and covers a sense of overall well-being. According to WHO, key components of health include physical, mental, social, environmental, and occupational health, which are all interconnected and contribute to the overall well-being of individuals and communities (World Health Organization, 2022). Mental health is a significant aspect of total positive emotion and life satisfaction. It's a state where individuals can fulfil their potential, cope with life's challenges, succeed in their work, and contribute to their community's well-being (Ferrie et al., 2020). Additionally, Good mental health is characterized by a state of well-being that enables individuals to manage the typical stresses of life and to function effectively. It equips individuals with the necessary skills and resilience to confront and address abnormal and potentially harmful stressors in a productive manner. The enhancement of good mental health contributes to greater well-being, competence, and resilience, empowering individuals to improve their mental health and gain greater control over it. Several factors define good mental health, including mental health literacy, attitudes towards mental disorders, self-perceptions and values, cognitive abilities, academic and occupational performance, emotional regulation, behaviours, self-management techniques, social skills, relationships with family and significant others, physical health, sexual health, sense of purpose, and overall quality of life. However, research suggests that it is essential to evaluate

the effectiveness of interventions aimed at enhancing each of these dimensions to promote Parents with good mental health are more likely to engage in positive parenting practices, such as providing emotional support, setting appropriate boundaries, and promoting healthy child development. Parents' mental well-being can serve as a positive role model for their children, teaching those effective coping strategies, resilience, and emotional regulation skills. Parents' mental health contributes to overall family functioning, creating a healthier and more supportive family environment for children to grow (Wu et al., 2023). Parent's mental health issues, such as emotional problems or personality disorders, can negatively impact their parenting skills, resulting in inconsistent discipline, poor child-rearing practices in mothers, and increasing the likelihood of child maltreatment, abuse, and neglect (Ben David, 2021).

On the hand, Depression and anxiety are one of the dimensions of mental health, that affect individuals' daily lives and health status with their social and economic capacity. Depressive symptoms comprise a lack of appetite, body weight, sleep disturbances, agitation, fatigue, decreased cognitive abilities, sensations of worthlessness, and excessive guilt that could lead to suicide (Kang et al., 2023). Besides, depression and anxiety are mostly diagnosed together; anxiety is characterized as a negative emotional state that arises from the anticipation of potential danger, which has numerous underlying causes. This emotional state is often along with other symptoms such as difficulty in concentrating or making decisions, feeling irritable, tense, restless, experiencing nausea or abdominal discomfort, having heart palpitations, sweating, shaking, and insomnia (Akpınar and Karadağ, 2022). The available data indicates that parents of preterm new-born infants are at an increased risk of experiencing depression, which can have adverse effects on both parents and their relationships with their infants. Additionally, this can negatively impact the infant's development (Pierce et al., 2020, Axelin et al., 2022).

During, the COVID-19 pandemic has created a global health crisis that has endangered the mental health of individuals worldwide. The anxiety and uncertainties stemming from the virus's outbreak, as well as the widespread lockdowns and economic downturn, are expected to increase mental health issues and suicide rates (Khan et al., 2022). The past two years have brought numerous challenges and unpredicted changes to families' everyday lives. Research has demonstrated a correlation between parental stress and mental health, and the implementation of lockdown measures during the pandemic (Xiong et al., 2020).

Parents of hospitalized children often experience mild to moderate stress. Factors such as marital status, education level, the child's length of stay, and hospital visit frequency can increase stress. Increased stress negatively impacts parental satisfaction, while satisfied parents tend to feel less stressed. Parental stress and anxiety may affect the entire family members, moreover, it can also affect the child in two different ways, inability of the parent to help the child and transmit the stress to the child which can make it difficult for the child to cope with hospitalization and illness. Several studies have examined temperamental traits, such as coping with stress, as one of the dimensions of the multidimensional predictor of the psychological changes of parents (Zdun-Ryżewska et al., 2021, Debelić et al., 2022). To help parents during their child's hospitalization, hospital administrators and policymakers should adopt a Family-Centred Care (FCC) approach. This approach emphasizes interactive communication, support, and involvement in the child's care, recognizing the important bond between families and nursing staff. Acknowledging parents' efforts and addressing their emotional and social needs can enhance their sense of care. Paediatric nurses play a key role in assessing parental stress and offering communication and emotional support, which can improve satisfaction and health care quality, while also preventing emotional distress and depression (Canga et al., 2020).

Furthermore, Insomnia symptoms were evaluated mainly through subjective reports that align with the diagnostic criteria for insomnia. These symptoms included at least one of the following: difficulty initiating sleep, maintaining sleep, or waking up prematurely in the morning, with or without related impairments in daytime functioning. To qualify, these symptoms needed to occur frequently (three or more nights per week) and persistently (for at least one month), and they were reported either by the study participants themselves or by a clinical sleep specialist or psychiatrist (Lovato and Lack, 2019). Study reported that Sleep problems during pregnancy and after childbirth are important stressors that can negatively impact the mental health of both parents and their babies. Issues like maternal insomnia can lead to mental health disorders in parents and worsen sleep issues for infants, increasing the risk of mental health challenges later in life. Research often misses the family aspect of these issues, which affects our understanding of the connections between sleep and mental health in families. Therefore, there is an urgent need for tailored interventions that consider the needs of all family members and the complex interactions involved (Baglioni et al., 2022).

Mothers of children who are hospitalized often experience somatic symptoms, such as pain fatigue. This condition exacerbates their physical burden, diminishes their efficiency in various

tasks, and depletes their energy, ultimately impairing their coping mechanisms. Such challenges may adversely affect the child's recovery process and delay the overall long-term growth and development (Jung and Cho, 2024). The process of hospitalization often presents various challenges that families encounter, necessitating effective adaptations and prompt interventions. These challenges may include alterations in daily routines, emotional distress, social isolation, and financial strain. Families may experience withdrawal from social networks, neglect of other children, and marital discord, among other issues. Consequently, in the dominion of mental health care, it is crucial to acknowledge the distinct characteristics of each family. This recognition facilitates the provision of personalized care that covers not only the patient but also their support system and the healthcare professionals involved in their treatment (Barbosa et al., 2023).

Parental mental illness that is severe has been acknowledged as a crucial factor that raises the likelihood of mental health problems emerging in children, highlighting the importance of taking action and providing support to these children from a public health viewpoint (Nordh et al., 2022). It is well recognized that the mental health of parents has direct and indirect consequences for children research has shown that when parental mental health conditions coincide with disadvantaged socioeconomic positions, children are more likely to experience somatic morbidity (Renneberg et al., 2023).

Therefore, it is crucial to prioritize interventions that address these risk factors to promote better mental health outcomes for both parents and their children. Improved maternal mental health, increased feelings of competence, and enhanced interactions with their infants has been demonstrated through peer support for parents after NICU discharge. This support has been shown to decrease parental stress, anxiety, and depression, resulting in positive outcomes for both the parents and child (Fratantoni et al., 2022).

Research has demonstrated that the mental well-being of parents, especially after the diagnosis of congenital heart disease in their child, has a substantial impact on family functioning and the psychosocial development of the child. It is influential to provide proactive support for parental mental health and family functioning following a diagnosis to promote the child's psychosocial adaptation. However, there is still a lack of understanding regarding parental mental health and family functioning, and further research is necessary to identify the factors

that influence child outcomes and to develop effective interventions to enhance parent mental health and family functioning (Sood et al., 2021).

It is essential to attend to the psychological experiences of parents whose children are hospitalized. The distress of parents can have a profound impact on the long-term development of their children. Therefore, healthcare providers must strive to accurately assess the mental health of parents of hospitalized children and provide them with the necessary support and resources to manage the challenges they confront during their child's hospitalization (Zhang et al., 2022). However, implementing the fundamental principles of the FCC approach has a great impact on developing positive and respectful partnerships between hospitalized children, their parents, and nurses. Such as taking parents' concerns seriously, and engaging them as participants in making decisions and clarifying procedures, parents feel more secure, reducing anxiety by establishing a therapeutic relationship with the nursing team (Gutiérrez et al., 2020). Moreover, the new intervention strategy based on the synthesis of quantitative and qualitative research evidence has been documented by a study, the strategy also guides paediatric nurses in managing the stressful experience of parents when faced with hospitalized children in an Intensive Care Unit (ICU) with a critical condition. In addition to assisting with coping, this novel intervention approach seeks to lessen the condition's long-term psychological effects and parental stress (Christian, 2020). Upon examining the existing literature, the researcher identified a significant gap concerning the comprehensive evaluation of emotional well-being and parental mental health during acute illnesses or short-term hospitalizations. The majority of current studies predominantly concentrate on parents of children with chronic illnesses (Cohn et al., 2020, Pinquart, 2019) . In light of the paediatric department's priorities, specifically priority number 20, which focuses on "enhancing the health of neonates and their families," and priority number 7, which emphasizes "improving family health literacy," this research aimed to examine the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences in 2024, Tehran, Iran.

2. Rationale of Study

This research is crucial for enhancing policy-making and implementing effective interventions strategies that will improve the quality of life of parents which impacts the emotional, mental and psychological well-being of families. Moreover, parent's general well-being and quality of life is key requirement in FCC. It is well recognized that parents' mental health has both direct and indirect impacts on their children, highlighting the importance of prioritizing

caregivers' mental well-being for the benefit of both themselves and their kids. A substantial body of literature had explored this connection in pediatric healthcare environments, such as outpatient and specialty clinics, as well as inpatient facilities, where stress levels and the effects of caregiving are especially significant (Salley et al., 2023).

In Iran, prevalence of anxiety and mental health among the parents is significant, studies show the substantial proportion of parent experience emotional distress ranging from mild upset to more severe psychological difficulties. However, since there is connection between maternal anxiety and child's psychological well-being, it would be valuable to provide support for parents, predominantly those who are housewife with lower educational levels, as they may encounter heightened stressors that adversely affect their children's emotional well-being (Abdi et al., 2024, Chatzoglou et al., 2020, Heydarpoor Damanabad et al., 2019). Furthermore, study shows that parent anxiety has related to lack of unmet needs for information, support and guidance experienced from the health care providers (Zarei and Negarandeh, 2021). Parental mental health during the perinatal period is a crucial element that influences the outcomes of children who are at high risk. (Erdei et al., 2021). Although interventions grounded in evidence have been developed to specifically address the concerns related to the mental health of parents. Enhancing family- centred care approach may improve the quality of life of parents and their ill children. In addition, the outcomes of the study may promote teamwork among mental health practitioners, educators, and community organizations to create inclusive support systems for parents. This collaborative strategy could cultivate a sense of community and shared experience, assisting parents in feeling less alone in their difficulties. Overall, the consequences of this research reach beyond personal coping mechanisms, possibly affecting wider societal perspectives on parental mental health and the significance of support during difficult periods.

3. Research Objectives and Goals

4. General Goal:

Determining the general mental health of parents of children hospitalized in medical centres 'affiliated with the Tehran University of Medical Sciences in 2024.

5. Specific Objectives:

1. To determine the somatic symptoms of the general mental health of the parents of hospitalized children.

2. To determine the anxiety and insomnia of the general mental health of the parents of hospitalized children.
3. To determine the social dysfunction of the general mental health of the parents of hospitalized children.
4. To determine the severe depression of the general mental health of the parents of hospitalized children.
5. To determine the total score of the general mental health of the parents of hospitalized children.
6. To determine the correlation between the general mental health of the parents and relative demographic variables.

6. Practical Goals:

In the study we examined parental mental health status during the hospitalization of their children, then the result of this study can help hospital managers to improve their guidelines and supportive programs for parents' mental health aimed at helping the entire family system and also guide future research and clinical practice to address parental mental health concerns in nursing practice

7. Research questions

1. What are the somatic symptoms of the general mental health of the parents of hospitalized children?
2. What is the anxiety and insomnia of the general mental health of the parents of hospitalized children?
3. What is the social dysfunction of the general mental health of the parents of hospitalized children?
4. What is the severe depression of the general mental health of the parents of hospitalized children?
5. What is the total score of the general mental health of the parents of hospitalized children?
6. What is the correlation between general mental health of parents and related demographic variables?

8. Theoretical and Operational definitions:

Mental Health (Theoretical Definition):

WHO, defines mental health as a state of well-being in which the individual can cope with the stress of life, recognize their ability to do some task and understand his/her ability to contribute to their community (World Health Organization, 2022).

Mental Health (Practical Definition):

It was in line with theoretical definition.

Children (Theoretical Definition):

Every person who has not yet reached the age of 18 is considered a child unless the laws applicable to them specify that the majority has been achieved at an earlier age (Singh et al., 2019).

Children (Practical Definition):

Hospitalized children of Medical Centre Affiliated to Tehran University of Medical Sciences

Parents (Theoretical Definition):

Parents are individuals who hold significant rights and responsibilities towards their children, play the important role in guiding and supporting their growth and development, ensuring they mature into responsible and well-rounded person (Sandin, 2020).

Parents (Practical Definition):

It was in line with theoretical definition.

Parent's General Mental Health (Theoretical Definition)

Parents' mental health is the positive well-being that can act as a good example for their children, imparting effective coping strategies, resilience, and emotional regulation skills, enhances overall family functioning, fostering a healthier and more supportive family atmosphere for children to develop (Wu et al., 2023).

Parents' General Mental Health (Practical Definition):

In this study, according to the theoretical definition, general mental was defined as the score obtained from the responses of parents accompanying children of different ages admitted to

the children's medical centre affiliated with Tehran University of Medical Sciences from answering the GHQ-28 questionnaire. This questionnaire was composed of 28 items in 4 subscales including somatic symptoms items (1 to 7), anxiety/insomnia (items 8 to 14), social dysfunction (items 15 to 21), and severe depression (items 22 to 28). Each question was given a score on a 4-point Likert scale (0-3) where a higher score indicates more distress; the sum of the points for each of the 28 items yields the final score. A higher GHQ-28 overall score points to a higher chance of mental health problems (Sterling, 2011).

Table of Variables

Variable Name	Variable Role	Variable Type	Measurement Method	Scale
Parents' Mental Health	Independent	Quantitative/Discrete	GHQ-28	The GHQ-28 is composed of 28 items in 4 subscales including somatic symptoms items (1 to 7), anxiety
Age	Independent	Quantitative/Discrete	Demographic scales	years
Gender	Independent	Qualitative/Nominal	Demographic scale	Male/ Female
Educational status	Independent	Qualitative/Ordinal	Demographic scale	Reading and Writing ability/Diploma (High School) /AD/BS/MS/PhD and above
Economic status	Independent	Qualitative/Ordinal	Demographic scale	Good/bad
Marital status	Independent	Qualitative/Nominal	Demographic scale	married /separated / divorced and so on
Occupation /job	Independent	Qualitative/Nominal	Demographic scale	Unemployed - Housewife - Employee
Living Area	Independent	Qualitative/Nominal	Demographic scale	Urban/Rural
Size of the family	Independent	Qualitative/Nominal	Demographic scale	Number of People

Chapter 2

Literature Review

8. Chapter 2

Literature review

Chapter overview

This chapter introduces the research topic's conceptual framework and key concepts, including the definition, concept, and history of health and general mental health, with its dimensions. It will address the challenges and consequences of parental mental health in the context of hospitalized children, underlying theories, and strategies for promoting parental mental health in children's hospitals, highlighting the role of paediatric nurses. Furthermore, the chapter reviews and critiques relevant literature and existing studies on the research topic.

9. Research Conceptual Framework:

Definition and Concept of Health

Definition, Concept and History of Health The understanding of overall health has undergone significant changes over time, moving beyond the simple absence of illness to a more holistic perspective. According to the WHO, health is defined as a comprehensive state of well-being that includes physical, mental, and social aspects, rather than just the lack of disease or disability. This definition highlights that health is not a fixed state but an ongoing process influenced by various elements, such as one's lifestyle choices, surrounding environment, and interpersonal relationship (Schramme, 2023).

Health and wellbeing, while frequently treated as distinct concepts, are intrinsically interconnected. Various definitions of health extend beyond merely the lack of disease or disability, encompassing a holistic state of wellbeing. A notable illustration of this is found in the 1948 constitution of the WHO, which characterizes health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Wellbeing, an essential aspect of health and everyday existence, comprises various elements, and numerous definitions are available. The WHO's definition of wellbeing encompasses managing the stress of daily living, recognizing one's own abilities, working effectively, and having the capacity to contribute to the community (World Health Organization, 2022).

The WHO was founded between 1946 and 1948 as a United Nation (UN) initiative, with 61 nations signing its Constitution, introducing a notable definition of health”. The aimed is to

improve global health to promote world peace, following the historical reasons for World War II that did not directly relate to health issues (Callahan, 1973). After the establishment of a health definition, more factors were taken into account to create health themes aimed at improving health outcomes. Among these, health is defined as a state of well-being. The description of health as well-being is interpreted by others as the ability to live, encompassing the capacity to feel good while experiencing mobility, enjoyment, and social connections. This includes having positive expectations and achieving personalized fitness levels that enable a fulfilling and creative life (Callahan, 1973, Allen et al., 2007). Moreover, studies investigated the relationship between happiness, positive feelings, and optimal health, with a focus on fostering well-being. It emphasizes the interconnectedness of well-being and seeks to incorporate this understanding into health promotion strategies, which encompass both the science and the art of assisting individuals in altering their lifestyles to achieve optimal health. Health promotion, or health enhancement, is pertinent to individuals who are healthy and seek preventive measures, those at risk or in the early stages of illness, people with chronic conditions, and anyone requiring treatment for acute health issues (Allen et al., 2007, Saylor, 2004). In addition to those themes, perhaps the most significant initiative taken by the organizers of the WHO was to include mental health as part of its working definition (Callahan, 1973).

10. Definition, Concept and History of Mental Health

The evolution of mental health movements in post-war Britain can be categorized into three interrelated yet distinct phases. The initial phase commenced immediately following World War II and extended into the early 1960s. This period was marked by the prominent role and advocacy efforts of the National Association for Mental Health (NAMH), an organization emerging from the mental hygiene movement. However, this phase was also characterized by various scandals surrounding mental hospitals and the emergence of a renewed critique of psychiatry and mental health services, grounded in civil and human rights perspectives. The second phase, which spanned from the early 1960s to the 1970s, was defined by a growing opposition to psychiatry (Jones, 2013). This opposition was commonly linked to the anti-psychiatry movement, but it also included the Church of Scientology, a newly radicalized and politically active NAMH (which rebranded as MIND in the early 1970s, adopting a more legalistic and rights-oriented, albeit still paternalistic, approach), and the initial developments of the user movement. Notably, The Mental Patients Union (MPU) and the Community Organisation for Psychiatric Emergencies (COPE), both significant social movements

organizations (SMOs) within the user movement, were established in the early 1970s. The third phase, which began in the 1970s and continues to the present, has seen a diversification of competing and conflicting groups and movements. During this time, the user movement has significantly expanded, leading to the establishment of several stable and influential SMOs (notably Survivors Speak Out and the United Kingdom Advocacy Network). Concurrently, a new counter-movement has emerged, opposing what it views as the excessively liberal perspectives of certain psychiatrists, anti-psychiatrists, and users, and emphasizing the rights of users' families, neighbours, and communities. This counter-movement is primarily represented by organizations such as The National Schizophrenia Fellowship (NSF), Schizophrenia – A National Emergency (SANE) and The Zito Trust (ZT) (Crossley, 1998, Jones, 2013).

11. Concept of Positive Mental Health

The publication titled 'Concepts of Positive Mental Health' is one of the few works that attempts to articulate the definition of positive mental health through a series of attributes. These attributes include an accurate perception of reality, self-awareness, the capacity for voluntary behavioural control, self-esteem, self-acceptance, the ability to establish loving relationships, and overall productivity (Barry, 2009). Although many of these characteristics are present in contemporary definitions, there is a growing concern that they may be influenced by cultural, gender, temporal, and locational factors. The definition of mental health is evidently shaped by the cultural context in which it is situated, and its interpretation may vary based on socioeconomic and political contexts. From a cross-cultural standpoint, it is crucial to acknowledge that comprehension of positive functioning is likely to be significantly shaped by cultural perceptions of health and illness, as well as societal values, norms, and social influences (Huppert and Wittington, 2005). Given that mental health is deeply rooted in the social and cultural fabric of societies, the creation of culturally sensitive and reliable indicators of mental health presents a significant, albeit challenging, methodological issue. This perspective challenges the notion that mental health is merely the absence of mental illness. The description underscores various dimensions of positive mental health, including subjective well-being, emotional balance, and the development of skills necessary to navigate life, realize one's potential, and engage meaningfully in society. Consequently, the concept of positive mental health encompasses the capacity for psychological, emotional, intellectual, social, and spiritual development (Herrman and Jané-Llopis, 2012).

The distinction between positive and negative well-being is emphasized, illustrating that mental health and mental disorders do not exist as opposing extremes on a singular continuum; instead, they represent separate yet interrelated dimensions. Consequently, the lack of a mental disorder does not necessarily imply the existence of mental health, as individuals devoid of mental disorders can still experience a range of positive mental health outcomes (Cattan and Tilford, 2006).

12. Definition of Mental Health

Mental health can be defined as a condition characterized by emotional stability, appropriate behavioral responses, and the ability to form productive relationships while managing everyday life challenges. It addresses various important elements such as emotional well-being, social well-being, biological factors and mental illness (Fusar-Poli et al., 2020).

Typically speaking, mental health has no one perfect definition. Generally speaking, a person's actions can reveal information about their psychological health. Assessing mental health, however, could be challenging as everyone could interpret acts differently according to their own beliefs and perspectives. Generally speaking, mental health is characterized by emotional, psychological, and social well-being, which manifests in strong interpersonal relationships, adaptable attitude and coping techniques, a good self-image, and emotional resilience (EDITION).

Mental health encompasses numerous components, and it is influenced by a diverse array of factors. These factors interact with one another; therefore, an individual's mental health is a dynamic and ever-evolving state. Factors that affect a person's mental health can be classified into three categories: individual, interpersonal, and social/cultural. Individual or personal factors consist of a person's biological composition, autonomy and independence, self-esteem, potential for growth, vitality, ability to derive meaning from life, emotional resilience or hardiness, sense of belonging, reality orientation, and coping or stress management skills. Interpersonal or relationship factors involve effective communication, the capacity to assist others, intimacy, and a balance between separateness and connectedness. Social/cultural or environmental factors encompass a sense of community, access to sufficient resources, intolerance of violence, support for diversity among individuals, mastery of the environment, and a positive yet realistic perspective on one's world (EDITION).

Emotional well-being: This involves the experience of positive emotions and contentment with life. Psychological Well-being: This includes factors such as self-acceptance, continuous

personal development, having a sense of purpose, and independence (Langeland, 2024). Biological factors: The human brain represents a remarkable achievement in nature, facilitating humanity's evolution from basic beginnings to significant milestones of brain development. This study reported that the brain's functions, emphasizing its role as a complex computer with sensory and motor systems that process thoughts, language, memory, and perceptions. Moreover, it highlights the overlapping nature of neurological that lead disturbed of mind and psychological disorders, stressing the importance of understanding their interplay for a comprehensive grasp of brain health and function in accordance of generalize mental well-being (Blows, 2021).

As deepen in comprehension of brain development, it is through a growing awareness of the intricate relationship between genes and environments, along with the effects of that interaction on other environments experienced by an individual the aim is to enhance capacity to understand and support mental health. the goal is to better prevent, identify, and refer those parents with mental disorders, ultimately improving care and outcomes of hospitalized pediatric population. Epidemiological evidence indicates that prenatal and early childhood experiences significantly impact later health and well-being. Rapid brain development during this period can experiences changes caused by emotional, social, and biological influences, shape brain function and adaptation throughout life, affecting health, learning, and behavior (Spenrath et al., 2011). Therefore, there is a connection suggesting that certain mental illnesses related to genetic factors or environmental influences result in structural or functional alterations in the brain.

Mental health can be defined as a condition characterized by emotional stability, appropriate behavioral responses, and the ability to form productive relationships while managing everyday life challenges. It covers several key aspects (Gautam et al., 2024). Emotional Well-being: This involves the experience of positive emotions and contentment with life. Psychological Well-being: This includes factors such as self-acceptance, continuous personal development, having a sense of purpose, and independence. Social Well-being: This refers to the maintenance of supportive relationships and a sense of connection with others (Elizabeth and Kimberly, 2022). The mental health continuum includes a range of states, with well-being situated at the "healthy" end. Individuals experiencing well-being demonstrate good mental and emotional health, effectively managing everyday stressors without significant impairment to their daily functioning. While they may encounter stress and discomfort from occasional life challenges,

their coping mechanisms remain robust. At the opposite of this range lie mental health problems, characterized by increasing difficulty in handling serious stressors. This range is further divided into two categories: emotional problems/concerns and mental illness. Those grappling with emotional problems experience elevated levels of distress, ranging from mild to moderate. Consequently, they may face minor or temporary functional impairments, such as disrupted sleep patterns, diminished concentration, or reduced appetite (Elizabeth and Kimberly, 2022). Mental illness is when a person's level of distress becomes substantial, and they have moderate to severe impairment in daily functioning at work, or home. Mental illness includes comparatively common disorders, such as depression and anxiety, as well as less common disorders such as schizophrenia (Tse and Haslam, 2023).

Parental mental health refers to the psychological state of parents and how it influences family interactions, especially the growth of children and the overall resilience of the family unit. The mental well-being of parents can shape the emotional atmosphere, focus, and stability of care provided at home. These factors are essential for a child's emotional and cognitive growth (Murthy, 2024).

Re-conceptualizing mental health emphasizes the necessity of examining both psychopathology and positive wellbeing as trans-diagnostic factors when considering the mechanisms underlying parenting and relational development. Research has indicated that certain positive wellbeing constructs should be taken into account, such as self-compassion, mindfulness, and metallization (Risi et al., 2021).

Insomnia is a troubling and debilitating condition that impacts approximately one-third of the general population. Research from both epidemiological and clinical perspectives indicates that a significant proportion of individuals with insomnia also experience a coexisting mental health disorder, predominantly depression or anxiety disorders; estimates suggest that between 40% and 60% of those reporting insomnia fall into this category. Retrospective analyses aimed at determining whether insomnia arises from a primary sleep disorder or is a manifestation of an underlying mental health issue have revealed that insomnia is primarily an associated symptom of the mental disorder rather than a standalone diagnosis. Nevertheless, the influence of chronic insomnia on this relationship and the frequency with which chronic insomniacs have previously encountered a mental disorder remain underexplored. Longitudinal studies involving individuals with insomnia have indicated that the persistence of insomnia symptoms over time heightens the risk of developing a concurrent mental health disorder (Ohayon and Roth, 2003).

The relationship between insomnia and anxiety is increasingly acknowledged as intricate and reciprocal. Both conditions are linked to adverse health outcomes, heightened healthcare usage, functional impairments during the day, and an overall decline in quality of life. However, when they coexist, they appear to exert independent and cumulative negative impacts. Insomnia serves as a distinct risk factor for the development of anxiety disorders, and conversely, anxiety can exacerbate insomnia. The presence of insomnia uniquely influences the progression of various anxiety disorders. Therefore, effective diagnosis and treatment of coexisting insomnia and anxiety necessitate a comprehensive understanding of their intricate relationship. In a recent examination of the connections between anxiety and insomnia, study introduced two primary theoretical frameworks regarding their relationship. The first framework posits that anxiety and insomnia are distinct manifestations stemming from an unidentified core neurobiological vulnerability. The brain reacts to repeated stressors affecting this predisposition, leading to the emergence of anxiety and insomnia symptoms. The second framework acknowledges anxiety and insomnia as separate disorders that either produce similar symptoms and morbidity over time or arise as a result of another prevalent, yet unspecified, factor. study investigated the relationships among the onset and progression of insomnia, anxiety, and depression, revealing that a more nuanced analysis of insomnia's onset and trajectory in relation to anxiety offers significant clinical insights, particularly when compared with the relationship between insomnia and depression (Johnson et al., 2006).

Somatization refers to the process of converting mental experiences and states into physical symptoms. Somatic symptom disorders can be identified by the existence of physical symptoms that imply a medical condition, yet lack a clear organic cause to fully explain them. The three primary characteristics of somatic symptom disorders are as follows: Physical complaints indicate a significant medical illness but lack a verifiable organic cause. Psychological factors and conflicts appear to play a crucial role in the onset, worsening, and persistence of the symptoms. Symptoms or heightened health concerns are not consciously regulated. These persistent, nonspecific symptoms can be burdensome enough for individuals to seek medical consultation, yet they do not meet the criteria for a medically recognized disease, often referred to as medically unexplained symptoms or persistent physical symptoms. Despite this, they can noticeably hinder the daily functioning. Defined clusters of symptoms may persist over an extended duration, manifesting as functional somatic syndromes, such as fibromyalgia syndrome or irritable bowel syndrome, which are typically linked to substantial limitations in daily activities. Additionally, conditions that meet the criteria for pronounced

somatoform disorders and the newly identified somatic stress disorders require considerable impairment in everyday functioning and are frequently accompanied by psycho-behavioural symptoms (Roenneberg et al., 2019).

Somatic symptom disorders include Somatic symptom disorder is defined by the presence of one or more physical symptoms that lack an organic origin. Individuals often devote considerable time and energy to health-related concerns, frequently perceiving their symptoms as signs of a severe illness, and endure substantial distress and anxiety regarding their health. Conversion disorder, also referred to as conversion reaction, is characterized by sudden, unexplained deficits in sensory or motor functions (for instance, blindness or paralysis). These deficits may imply a neurological disorder but are linked to psychological factors. Typically, there is considerable functional impairment, and individuals may exhibit *la belle indifférence*, displaying an apparent lack of concern or distress regarding the functional loss. Pain disorder is primarily marked by the symptom of pain, which is usually not alleviated by analgesics and is significantly influenced by psychological factors concerning its onset, intensity, exacerbation, and persistence. Illness anxiety disorder, previously known as hypochondriasis, involves an excessive preoccupation with the fear of having a serious illness (disease conviction) or the fear of developing a serious illness (Bass and Wade, 2019, Black, 2018) .

Social functioning refers to an individual's capacity to engage in both structured and unstructured interactions within family, friendship, or peer networks, as well as in community activities. As inherently social beings, humans highly prioritize regular social engagement, and restrictions in these interactions can lead to a decline in overall quality of life. Furthermore, deficits in social functioning have been demonstrated to adversely impact both physical and mental health outcomes (Herrera-Escobar et al., 2019).

Social relationships are typically categorized into three primary areas: social support, social networks, and social connectedness. The impact of social support on mental health and well-being has been extensively documented. Research differentiates between perceived support, which is the subjective sense of being supported by one's social connections, and received support, which refers to the tangible assistance provided. Furthermore, the literature classifies social support into emotional support such as the availability of someone to listen or provide sympathy during difficult times and instrumental support, which involves practical help with tasks requiring physical effort or financial resources. Each of these forms of social support appears to have distinct effects on mental health. Additionally, support can be given or received

from various sources, including spouses, children, relatives, friends, and colleagues. Studies have shown that the influence of social support on health and psychological well-being is contingent upon the source of that support. Social relationships can be analyzed through their structural framework (i.e., social networks) and their functional roles (i.e., social support). Consequently, while social support pertains to the functional aspects of social relationships, social networks refer to the formal organization of these relationships, including factors such as size, composition, frequency of contact, and boundaries. Research on social networks has focused on the intricate web of social connections surrounding an individual, revealing significant correlations with both physical and mental well-being. There are two primary methodologies for evaluating social networks: egocentric and sociocentric approaches. Egocentric models gather data from individuals regarding the members of their networks, while sociocentric models incorporate not only individual network data but also insights from the network members themselves. As a result, sociocentric models often provide more innovative findings, albeit with higher data requirements. Another valuable method for analyzing social networks involves classifying them into various types, such as network composition (e.g., the diversity of family, friends, and colleagues within a network) and other indicators like social engagement. Thus, categorizing network types allows for a more thorough evaluation of network characteristics and can yield particularly useful information. Ultimately, social connectedness pertains to the extent to which an individual feels a sense of belonging, attachment, relatedness, unity, or integration within their social relationships. It emphasizes subjective emotions and perceptions regarding oneself in the context of social interactions, rather than focusing on particular social ties. Additionally, the literature employs the concept of 'social disconnectedness' to describe situations of social isolation, including living alone, physical separation from others, and widowhood (Santini et al., 2015). From a clinical perspective, a decline in social functioning frequently indicates the onset of prevalent mental disorders, including depression and anxiety, as well as more severe conditions such as bipolar disorder, schizophrenia, or other psychotic disorders (Ploubidis et al., 2007).

13. Historical conceptualization of depression

Depression has been acknowledged since ancient times, although its understanding has changed considerably. Early civilizations, including the Greeks and Egyptians, linked symptoms of depression to supernatural influences or imbalances in bodily fluids (Hippocrates' concept of "melancholia" stemming from an excess of black bile). During the Middle Ages, depression was frequently interpreted through a religious framework, often associated with sin

or demonic possession. The Renaissance marked a transition towards medical interpretations, exemplified by Robert Burton's *The Anatomy of Melancholy* (1621), which provided initial psychological and physiological perspectives. The 19th century saw the emergence of contemporary psychiatric classifications, with Emil Kraepelin (German psychiatrist) differentiating depressive disorders from other mental health conditions. The 20th century introduced psychoanalytic theories by (Freud) and biological explanations (monoamine hypothesis), culminating in the creation of antidepressants in the 1950s. In the present day, depression is recognized as a complex disorder influenced by genetic, neurobiological, and psychosocial factors (Jansson, 2022).

Depressive disorders range widely based on their kind, symptoms, causes, and therapeutic needs. The classic illustration of Major Depressive Disorder (MDD) shows a minimum two-week-long persistent low mood or anhedonia together with cognitive and physical symptoms. A chronic kind of the disorder known as dysthymia, Persistent Depressive Disorder has less severe but continuous symptoms spanning two years or more. Along with extreme hypersomnia and carbohydrate cravings, the repeating seasonal pattern most clearly in the winter months is how Seasonal Affective Disorder is diagnosed. Postpartum Depression, the form specific to the perinatal period, develops after delivery and is distinguished by particular neuroendocrine changes. Premenstrual Dysphoric Disorder is defined by physical and mental symptoms that appear in the luteal phase and vanish after menstruation (Kendler, 2017, Kendler, 2019).

Vegetative symptoms are closely related to these vital disturbances and coenesthesia in depression. Common disturbances include issues with sleep, appetite, and digestion. Nonetheless, there can be several other vegetative symptoms associated with depression, such as abnormal salivation, sweating, and tearing, irregular heartbeats and breathlessness, loss of libido and various sexual dysfunctions, disruptions in menstrual cycles, fluctuations in body weight, diminished skin turgor, hair loss, reduced body temperature, nausea, vomiting, bloating, dizziness, excessive sweating, or feelings of coldness. Vital disturbances, coenesthesia, and vegetative symptoms often coexist with the well-known emotional, behavioural, and cognitive symptoms of depression (Kapfhammer, 2006).

14. Models and Theories related to Health-and Mental Health

Mental health and psychology comprehend various theories categorized by abstraction levels: Grand Theories, like psychodynamic and behavioural theories, are the most abstract; Middle-Range Theories, such as Bandura's self-efficacy theory, are more concrete; and Micro-Level

Theories are the least abstract. Despite their differences, these theories share a common focus on the interplay between the mind, body, and behaviour, guiding mental health research through diverse perspectives and frameworks (Gregory, 2020).

In this section, we will introduce some models and theories related to health-promoting behaviours, and mental health including the health belief model, and social cognitive theory. Behavioural theory, cognitive theory, Cognitive problem-solving model, psychodynamic theory, Humanistic psychology theory and Dual-continua model.

A. Health Believe Model:

The Health Belief Model (HBM), created in the 1950s by social psychologists, seeks to clarify why certain individuals refrain from utilizing health services such as immunization and screening. The model consists of four main constructs: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. Perceived susceptibility denotes an individual's evaluation of their likelihood of acquiring a disease. Perceived severity represents the individual's perspective on the severity of the disease and its possible effects. Perceived benefits emphasize the positive outcomes of participating in a recommended action, like diminishing disease risk. In contrast, perceived barriers pertain to the perceived obstacles or disadvantages associated with undertaking that action. These elements are believed to interact to affect the probability of engaging in health-promoting behavior (Ahn et al., 2024).

B. Social Cognitive Theory:

Albert Bandura established the Social Cognitive Theory to examine and clarify human functioning by considering the dynamic relationships between the individual, the environment, and behavior. Bandura's theory posits that individuals are active participants in their own growth and that they exhibit proactivity, self-regulation, self-reflection, and self-organization, although their capacity for personal agency is shaped by social systems. Individual factors could encompass personal values, self-efficacy, and expectations for outcomes. Environmental factors consist of the feedback and actions of others. The behavioral aspect may relate to previous actions and experiences. According to the Social Cognitive Theory, a person's behaviors are ultimately influenced by the interplay of personal goals, self-efficacy, outcome expectations, and social influences.

He outlines four fundamental methods for cultivating self-efficacy: (1) mastery experiences that lead to the successful acquisition of a reinforce, (2) social modelling, which entails observing the successes of others, (3) social persuasion aimed at bolstering an individual's

belief in their own potential for success, and (4) the instruction for individuals to interpret their own physical and emotional states as indicators of success. Emphasizing the significance of cognitive processes in shaping behaviour, Bandura has adopted the term 'social cognitive theory' to characterize his theoretical framework. The theory has become one of the leading frameworks in understanding motivation and is applied in health contexts to predict and comprehend individuals' health behaviors (Harris et al., 2012).

C. Behavioral theory

Cognitive-behavioural therapy (CBT) has undergone significant development since its origins in behaviour therapy, and it is frequently highlighted in reviews of evidence-based practices. Originating in the late 1950s and early 1960s, the integration of cognitive and behavioural theories has led to a sophisticated array of therapeutic strategies collectively referred to as CBT. Despite ongoing discussions regarding the value of incorporating cognitive elements into the classical behavioural framework, the focus of CBT has expanded beyond adult mental health issues. In recent years, there has been a notable increase in the variety of CBT techniques and associated studies aimed at children and adolescents. Proponents assert that CBT for younger populations is based on several key principles: (a) cognitive processes influence behaviour, (b) cognitive processes can be observed and modified, and (c) behavioural modifications can result from cognitive transformations (Carr, 2015).

While numerous individuals contributed to the early development of behavioural theory, John B. Watson's Behaviourism stands out as one of the first thorough attempts to articulate this theory. Building upon concepts initially introduced in his 'behaviourist manifesto' Watson contends that behaviourism should prioritize observable phenomena over consciousness. Observable behaviours encompass what an organism 'does,' including both overt actions like verbal communication and covert actions such as internal dialogue (i.e., thinking). Consequently, Watson's perspective incorporates cognitions into his understanding of human behaviour, positing that thinking is a form of subvocal speech, which is theoretically observable to the thinker. In contrast, psychodynamic theory posits that significant motivations and explanations for human behaviour reside in the subconscious, rendering them neither observable nor amenable to direct analysis (except through indirect methods such as dream interpretation or unconscious reactions to ambiguous stimuli). Furthermore, Watson underscores the critical role of stimuli both environmental and physiological that provoke observable responses (Hersen and Gross, 2008).

In his foundational texts, Watson presents several significant insights. Initially, he identifies various types of responses that seemingly do not necessitate conditioning. For instance, in alignment with Pavlov's findings, he notes that reactions to stimuli critical for species survival such as those indicating danger or the presence of food—do not require extensive conditioning histories. Nevertheless, Watson also collected evidence indicating that these fundamental behavioural patterns could be influenced by experience. Ultimately, he asserts that a considerable portion of human behaviour is acquired through classical conditioning mechanisms. Throughout his discourse, Watson consistently juxtaposes his perspective on learning with the dominant belief that heredity predominantly shapes human behaviour (Stricker et al., 2013).

Throughout the subsequent decades, B. F. Skinner significantly influenced behavioural theory by conducting extensive foundational research and engaging in thought-provoking theorization regarding the implications of laboratory experiments on operant conditioning. Drawing inspiration from Thorndike's law of effect, Skinner progressively differentiated his contributions from those of other behaviourists, such as Watson. While Watson primarily focused on the stimuli that provoke responses, Skinner's research places a greater emphasis on the outcomes of behavioural responses. A key concept that emerged from both Thorndike's and Skinner's investigations is the clear acknowledgment that, under specific conditions, both humans and other organisms are inclined to repeat behaviours that are followed by certain events or consequences. Behaviour can be reinforced positively by introducing a favourable stimulus (such as social, tangible, or physical rewards) or reinforced negatively by the removal of an aversive stimulus (Plante, 2010).

Skinner's theoretical framework also addresses the diminishment of behavioural strength. In particular, operant extinction refers to the cessation of consequences that sustain a specific behaviour, while negative punishment entails decreasing the occurrence of behaviour through the withdrawal of a consequence following its execution. Conversely, positive punishment aims to diminish behaviour by introducing aversive stimuli contingent upon the behaviour's occurrence. Skinner's analysis incorporates antecedents, particularly focusing on antecedent stimuli (such as discriminative stimuli) that influence behavioural responses due to a history of reinforcement associated with those stimuli. The three-term contingency elucidates the significant relationship between antecedent stimuli, the behaviour, and its consequence (commonly referred to as the A-B-Cs). Additionally, under certain conditions, setting events

that modify the discriminative functions of antecedent stimuli are considered in the analysis. Ultimately, Skinner's contributions to behavioural theory and applied behaviour analysis are extensive, encompassing concepts such as reinforcement schedules, shaping, fading, and functional analysis, among others (Hersen and Sturme, 2012).

Cognitive theory

Rational-emotive behaviour therapy (REBT), conceptualized by Albert Ellis in the 1950s, was initially referred to as rational therapy. In 1962, Ellis rebranded it as rationale motive therapy (RET) to set his theoretical framework apart from others with similar nomenclature and to clarify his stance against the philosophical doctrine of rationalism. In response to critiques from peers who noted the compatibility of his therapeutic methods with behavioural theory, Ellis further integrated behavioural components, leading to the renaming of RET to rational-emotive behaviour therapy. REBT has been recognized as a comprehensive therapeutic model that effectively amalgamates aspects of behavioural theory and practice, thereby blurring the lines between the various techniques employed in REBT and those found in behaviour therapy. The core principles of Ellis's Rational Emotive Behaviour Therapy (REBT) are encapsulated in the acronym ABCDE. In this framework, 'A' denotes an activating event that triggers irrational thought processes (for instance, a student receiving a low grade on an assignment). 'B' signifies the irrational and illogical beliefs that arise (such as the thought, 'I cannot tolerate receiving a poor grade'). 'C' refers to the emotional and behavioural repercussions stemming from these irrational beliefs (like feelings of sadness and social withdrawal). Consequently, the therapeutic focus is directed towards addressing the beliefs (B) rather than the activating event or its outcomes. Ellis noted that individuals experiencing psychological difficulties often have emotional and behavioural issues that primarily arise from their unrealistic expectations of themselves, others, and their circumstances. Thus, the therapist's role is to concentrate on the client's irrational thought patterns to facilitate significant improvements in emotional and behavioural functioning. The most substantial cognitive and behavioural transformations are achieved in the latter two stages of the model, where 'D' involves the therapist challenging irrational beliefs and thoughts (alongside other REBT strategies), and 'E' signifies the attainment of a healthier and more effective emotional, behavioural, and cognitive state (Hupp et al., 2008).

Aaron T. Beck stands as a pivotal figure in the evolution of Cognitive Behavioural Therapy (CBT). Independently developing his theoretical framework apart from Ellis, Beck was among the first to provide a comprehensive analysis of the significance of cognitive processes in the

context of psychopathology. In one of his foundational studies, he identified a series of cognitive distortions prevalent among his adult patients suffering from depression, concluding that the underlying cause of their depressive symptoms was rooted in these distortions. For instance, he noted that numerous patients viewed themselves as 'incapable, incompetent, and helpless,' irrespective of their actual circumstances. Beyond their negative self-perceptions, these individuals also harboured pessimistic beliefs regarding their future and the world at large. This constellation of negative beliefs concerning the self, future, and world was subsequently termed the 'cognitive triad,' highlighting the interplay between distorted cognition and depressive mood. In his initial presentation of the theory, A. Beck challenges the notion that mental health issues, such as depression, are primarily influenced by the emotions felt by the individual. Instead, he posits that the emotional, behavioural, and social dimensions of depression stem from cognitive distortions. Through interviews and extensive clinical observations of patients suffering from depression, he identified recurring patterns of cognitive distortions. Among the most prevalent types of depressive thought processes are arbitrary inference, selective abstraction, overgeneralization, and exaggeration. For instance, selective abstraction describes the inclination of certain individuals to focus solely on negative aspects of a situation while disregarding other relevant details. In the context of depression, an individual may remember a previous conversation, concentrating exclusively on perceived subtle criticisms while overlooking any positive remarks (Killeen and Fetterman, 1988). A. Beck has articulated that individual experiencing depression may transition cognitively from a state of 'mature' thinking to one of more 'primitive' thinking, which subsequently results in adverse emotional outcomes. Mature thinking is defined by reflective thought and insight, enabling individuals to develop a multidimensional, adaptable, and relatively non-judgmental self-concept. Conversely, primitive thinking is characterized by absolutes and generalizations, causing individuals to perceive themselves as immutable and inherently flawed. Initially, A. Beck's research concentrated on depression; however, he later proposed that cognitive theory could extend to other disorders, including externalizing issues and anxiety. Furthermore, while cognitive theory predominantly emphasizes cognition, A. Beck has contended that the interplay between cognition and affect may be intricate. Regardless, both Ellis and A. Beck shared a common aspiration that a deliberate focus on cognitions would facilitate a more effective reduction of negative affect (Leak and Gibbon, 1995).

Concept map of social cognitive theory

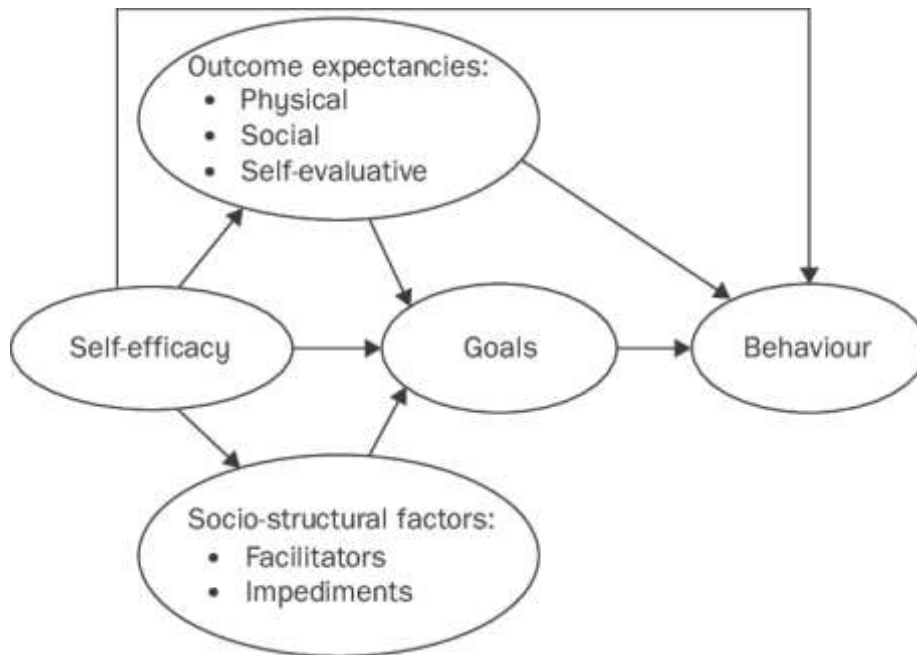


Figure 1: An illustration of social cognitive theory (Luszczynska and Schwarzer, 2015).

D. Cognitive Problem-Solving Model

Cognitive problem solving represents a model that has arisen from the integrationist viewpoint. D’Zurilla and Goldfried characterize problem solving as a 'self-directed cognitive-behavioural process through which an individual seeks to identify or discover effective or adaptive solutions for specific challenges encountered in daily life.' D’Zurilla's framework is significantly influenced by the contributions of R. Lazarus in formulating their 'coping' or problem-solving model. Within this framework, stress is conceptualized as a dynamic interaction between an individual and their environment, wherein the individual's coping mechanisms are tested. The stressors identified encompass both significant life challenges and everyday inconveniences. D’Zurilla and Nezu differentiate between two categories of coping responses. Problem-focused coping strategies aim to modify aspects of a situation (for instance, altering communication styles) and are most effective when the individual possesses some degree of control over the problematic scenario. Conversely, emotion-focused coping strategies involve efforts by the individual to alter their emotional reactions (such as employing relaxation

techniques to mitigate anxiety or anger) and are most applicable when the individual lacks control over the problematic situation (Barrett and Ollendick, 2004).

Problem solving begins with the identification of a situation that necessitates a coping response, followed by the development of an adaptive cognitive response, a behavioural response, or a combination of both. D’Zurilla and Nezu further differentiate between being problem-oriented and the act of solving the problem itself. To effectively generate solutions, one must first (a) acknowledge the existence of a problem, (b) attribute the issue to typical life circumstances rather than an inherent personal flaw, (c) recognize the problem's significance to one’s overall well-being, (d) demonstrate a commitment to invest time and effort in resolving the issue, and (e) possess a strong sense of self-efficacy along with an expectation for positive change. Their model of problem-solving is evidently shaped by Bandura’s theories. The actual process of problem-solving encompasses several key elements: (a) defining the problem, (b) brainstorming multiple potential solutions, (c) selecting the most effective solution, (d) executing the chosen solution, and (e) assessing the solution's success. Notably, the problem formulation stage may involve both cognitive and behavioural factors, and the proposed solutions can also be either cognitive or behavioural in nature (Jonassen, 2000).

E. Psychodynamic Theory

Freud established the foundation of psychodynamic theory through his psychoanalytic theory, positioning himself as the father of psychoanalysis. He identified two key components of the mind: the conscious, which includes awareness of thoughts and emotions, and the unconscious, housing inaccessible thoughts and feelings. Freud described personality as comprising three interacting parts: the id, which is impulsive and seeks immediate pleasure; the superego, representing moral standards derived from societal values; and the ego, acting as the rational mediator between the id and superego to manage conflict and anxiety (Deal, 2007). He further asserted that cognitive stress emerges from the discord among the three components. Freud posits that the id is the most primitive and instinctual element, embodying fundamental needs. The ego serves as the conscious and rational aspect that mediates between the id and the external environment, facilitating the fulfilment of desires in a socially acceptable manner. The superego represents the moral conscience, imposing penalties when ethical standards are breached. When an individual strives to fulfil their desires but encounters obstacles due to the

superego or external circumstances, a conflict arises. This discord can lead to the activation of anxiety or depression in certain situations (Leuzinger-Bohleber, 2022).

The development of Drive Theory was advanced by theorists who emphasized the increasing significance of the ego. Ego Psychology posits that the ego has been undervalued; rather than being a relatively weak entity in comparison to the id, the ego is viewed as an independent dynamic system capable of judgment, testing, cognitive processing, and the regulation of stimuli and personality traits. The ego plays a crucial role in managing both internal and external stimuli, as well as mediating conflicts between desires and the conscious mind. Proponents of ego psychology assert that depression arises from the ego's responses. Depression and anxiety manifest when the ego perceives threats that it cannot manage, leading to an inward turn of thoughts about death as a means of eliminating perceived dangers. When the ego is unstable, individuals struggle to address their internal needs and external experiences, resulting in emotional instability. Given the evidence supporting the efficacy of adaptive emotional regulation strategies, such as reappraisal, deficiencies in ego function may serve as a fundamental explanation for the onset of depression (Cai, 2023).

Concept map of social cognitive theory

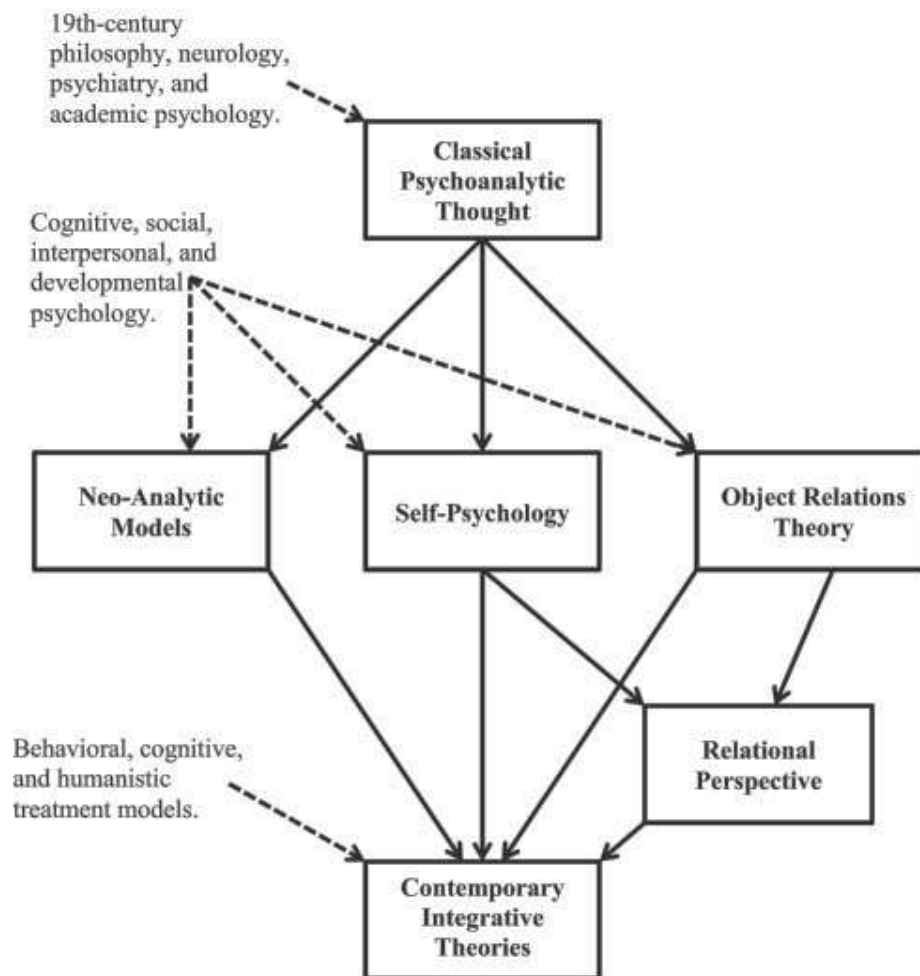


Figure 2: Depicts the development of the psychodynamic perspective from its inception in the late 19th century (Hopwood and Bornstein, 2019).

F. Humanistic Psychology Theory

Humanistic psychology emerged as a transformative movement within the discipline, driven by the realization that prior to the mid-twentieth century, existing psychological theories failed to adequately address the functioning and life goals of the 'healthy human being.' The pioneers of humanistic psychology contended that the dominant paradigms of experimentalism/behaviourism and Freudian psychoanalysis, which were the leading schools in American psychology at the time, had neglected consciousness and reduced the complexity of human nature and its creative and spiritual dimensions to mere studies of conditioned

responses in laboratory animals and the unconscious conflicts of neurotic individuals. These psychologists argued that the prevailing theories perpetuated a societal status quo marked by mechanization, materialism, bureaucratization, authoritarianism, conformity, compartmentalization of experience, and the disempowerment of individuals. Many of the founders of the humanistic movement had backgrounds in experimentalism/behaviourism and psychoanalysis, having established notable reputations in the field during the 1930s and 1940s. However, by the 1950s, their personal and professional experiences led them to critically evaluate conventional psychological thought and recognize its shortcomings. It is important to note that humanistic psychologists did not dismiss the contributions of behaviourism and psychoanalysis; rather, they integrated insights from these schools into a more comprehensive phenomenological framework that highlighted the significance of human experience and meaning (Bland and DeRobertis, 2017).

Historically, humanistic psychology has been more aligned with personality theory than with any other psychological approach. Prominent personality psychologists such as Allport, Kelly, Murphy, and Murray associated themselves with humanistic psychology as it gained formal recognition in the early 1960s. Allport concentrated on the functionally autonomous, intentional, and teleological aspects of personality, emphasizing continuous growth and transformation, which encompass qualities such as interpersonal warmth, realistic environmental perceptions, proactive behaviour, meaningful work and responsibility, as well as the importance of conscience and values in forming a cohesive life philosophy (the fourth and fifth postulates). Kelly's personal construct theory examined the process of meaning-making, focusing on how individuals interpret events rather than the events themselves, and encouraged the courage to venture beyond the comfort of one's current reality into the unknown (the fourth and fifth postulates). Murphy highlighted the role of curiosity, social feelings, openness to experience, and a commitment to an experiential approach to life in fostering a deeper connection with the universe (the second postulate). Murray contributed a classification of human needs, underscored the significance of emotions, critiqued the challenges of distinguishing between scientific facts and human values, and warned that an emphasis on superficial aspects can hinder creative imagination and obstruct healthy personality development (the fourth and fifth postulates) (Aanstoos, 2003). Since its establishment, humanistic psychology has been conceived as a distinctive synthesis of what contemporary scholars might classify as cultural psychology, cognitive psychology, and developmental psychology, while remaining distinct from any single one of these disciplines. The foundational

vision of humanistic psychology regarded individuals as inherently cultural without subscribing to cultural determinism, as cognitive without advocating for intellectualism, and as developmental without aligning with either individual or collective historicism. It was proposed as a comprehensive and integrative psychological framework aimed at authentically representing a more genuine self, actively engaged in the journey of becoming, and functioning within both biological and cultural contexts (DeRobertis, 2021).

G. Dual-Continua Model

The dual-continua or dual-factor models of mental health have been introduced by several scholars as a substitute for the bipolar model, suggesting that mental illness and positive mental health exist on separate continua rather than being the polar extremes of a single continuum. Within the dual-continua framework, mental health and mental illness are viewed as interconnected yet distinct entities, allowing individuals to attain high levels of positive mental health even when diagnosed with a mental illness. An illustrative comparison for the dual-factor model can be drawn from the dynamics of positive and negative affect. Initially, positive and negative affect were perceived as opposing ends of a bipolar spectrum. However, comprehensive statistical evaluations of positive and negative affect scores have revealed that these two constructs are, in fact, independent of one another, despite their apparent bipolar nature. In a manner akin to the discussions surrounding positive and negative affect, contemporary research suggests that individuals can possess significant positive mental health attributes even in the presence of psychopathology and mental illness diagnoses, and that positive mental health can be fostered in those who have received a mental illness diagnosis (Iasiello and Van Agteren, 2020).

A neural basis for the dual-continua model has been identified, indicating that positive emotions are processed through distinct neural mechanisms separate from those of negative emotions, likely fulfilling different evolutionary roles. It has been suggested that the broad and systematic implementation of the dual-continua model could lead to substantial reforms in the mental health care system, better equipping it to handle the significant challenges posed by mental illness. The dual-continua model has been examined through various philosophical lenses, leading to the identification of five primary implications: 1. It enables the characterization of mental health or mental illness as independent constructs, allowing for independent testing and measurement; 2. It permits individuals to experience both mental

health and mental illness simultaneously, thereby facilitating the formation of groups that would be unfeasible under bipolar frameworks; 3. It allows individuals to share information regarding their mental health while keeping details about their mental illness confidential; 4. It opens up new pathways for proactive system design in mental health promotion rather than merely reactive approaches; and 5. It reduces dependence on labour-intensive interventions, making it more broadly applicable (Barry, 2009).

The literature presents a variety of terms to characterize somatic symptoms associated with depression, including somatic, somatised, physical, bodily, somatoform, painful, psychosomatic, vegetative, medically unexplained, and masked. These terms denote distinct theoretical or diagnostic frameworks. In the context of depressive states, the term 'somatic' is favoured, encompassing a range of bodily sensations that individuals with depression find distressing or concerning. These dysesthesias are often concentrated in specific body regions or organs, but can also manifest as a general malaise affecting the entire body, as seen in symptoms like fatigue or diminished energy. Furthermore, fundamental physical dysfunctions related to sleep, appetite, or digestion fall under the umbrella of 'somatic.' Clinically, it is also important to distinguish between painful and non-painful somatic symptoms of depression. From a diagnostic standpoint, it is crucial to recognize that somatic symptoms are significant in both primary psychiatric disorders, particularly depressive and anxiety disorders, as well as in somatoform disorders. In differential diagnosis, somatic symptoms should be evaluated as potentially indicative of underlying physical illnesses. A notable diagnostic challenge arises from the frequent coexistence and interaction of depressive, anxiety, somatoform disorders, and medical conditions within individual patients (Kaltenboeck and Harmer, 2018).

Improving a family-centered care approach could enhance the quality of life for both parents and their sick children. This cooperative approach has the potential to foster a sense of community and shared experience, helping parents feel less isolated in their challenges. Parental anxiety regarding the hospitalization of their children is a prevalent and justifiable concern. Pediatric nurses are crucial in supporting and enhancing the mental well-being of parents. Their actions not only alleviate the emotional strain on parents but also positively influence the overall care and outcomes for children. Pediatric nurses, through Family-Centred Care (FCC), serve not merely as caregivers but as vital collaborators in fostering the mental health and resilience of parents. By facilitating parental engagement, offering emotional support, ensuring open communication, and honoring family diversity, nurses significantly

mitigate the psychological stress on families and assist them in managing the difficulties associated with their child's hospitalization (Zhu et al., 2025).

15. Literature review:

A literature review was conducted to search for related studies in the database including MEDLINE [PubMed], ProQuest, Science Direct and Google Scholar search engine. The search was conducted in the English language using the following keywords: “: Parents”, “General Health”, “Parents' Mental Health”, “Children” and “Hospitalization”. The titles and abstracts of the retrieved articles from a year 2015 to 2025 were read to find related articles to the study topic. Finally, eleven included articles were chosen as they had the highest relevance to the study's topic. A summary of the articles was presented as follows:

1. In a cross-sectional study conducted by Dadipoor et al. (2015) on "***investigating the mental health and coping strategies of parents with major thalassemia children in Bandar Abbas***", the aim was to determine the relationship between mental health and coping strategies of parents with thalassemia children in Bandar Abbas Iran. The study used a descriptive-analytic study 140 parents were selected by using a convenient sampling method based on inclusion criteria, informed consent was taken before the study, the study utilized a questionnaire filled by parents to gather the information, the instrument used in this study was GHQ-12 to assess the current state of their mental health, the study used Spearman's correlation coefficient, Chi-square and descriptive statistic to analysed the result, the result concluded that copying strategy is the association with the reduction of mental health problem. Among the demographic factors that significantly affect coping and mental health were age, gender, and the occupation of one's parents the study has a low response rate. Consistent with the 23% who participated in a shorter survey, which was sent to all NICU parents two weeks after discharge, only 20%–22% of the invited parents participated in the study. It is difficult to include parents of infants in survey studies during the first month after hospital discharge due to these low participation rates. Due to inclusion bias, a low response rate may also affect the validity of the findings (Dadipoor et al., 2015). The current study adopts a similar instrument to the previous research, the advance version of previous inurnment GHQ-28

2. In a study conducted by Zdun-Ryzewska et al. (2016) on "***Parent's stress predictors during a child's hospitalization***". The purpose of this study was to examine the interaction between stress experienced by the parent and temperamental traits for both child and the parent the study was carried out at the Polanki Children's Hospital in Gda 'nsk, Poland. The objectives were

to use three paper pencil questionnaire Perceived Stress Scale PSS), Emotionality Activity Sociability (EAS) and interview questionnaire, the study involved 203 parent and child during hospitalization, the primary objective was to investigate the interplay between the temperamental characteristics of both the child and parents during a stressful hospitalization scenario. Initially, the aim was to identify connections between the child's health, as perceived by the parents, the disruption caused by the child's illness to the family's daily life, the level of support provided, and the intensity of the parent's stress. Additionally, strive to determine the moderating effect of the child's age on the relationship between the parent's subjective assessment of the child's health, the support received, the family routine's disruption, the child and parent's temperamental traits, and the stress experienced by the parent. The study used Pearson correlation to analyse the result the, results shows that a key factor that influences the link between temperamental traits and the hospital-related condition of a child is the child's age. In examining the circumstances of a family with a hospitalized child, it is important to pay close attention to the emotional distress experienced by the parents. Regardless of the child's age, high levels of parental stress can be predicted by parental emotional distress, However, the study doesn't predict parent stress in social support teams by relatives and hospital staff, High levels of stress can exacerbate the challenging characteristics of both children and parents it's important to lessen the anxiety of parents and attend to the emotional well-being of children (Zdun-Ryżewska et al., 2021). This study aims to investigate the overall mental health of parents with hospitalized children, utilizing demographic variables to explore their relationship with parental mental health. Previous research has indicated that a significant factor affecting the connection between temperamental traits and the hospital-related conditions of a child is the child's age. When assessing the situation of families with a hospitalized child, it is crucial to consider the emotional distress that parents may experience.

3. Another study conducted by (2016) in UK on “***A qualitative study of sleep quality in children and their resident parents when in hospital***”. The objective of the study was to investigate the experiences of both children and their parents during hospital admissions. Semi-structured interviews were carried out with parents within a week following their child's discharge. The questions aimed to assess the quality of sleep for both parents and children, identify contributing factors, evaluate the perceived effects on daytime functioning, and propose enhancements to the ward's sleep environment. 17 parents of 16 children, aged between 3 and 12 years, participated in the interviews. Children who were admitted for surgical

procedures, as well as those with pre-existing sleep disorders or nocturnal seizures, were excluded from the study.

The results indicated that noise, light, and ward schedules were significant factors that disrupted sleep. Parents expressed that insufficient sleep led to challenges in their emotional regulation and that of their child, which in turn affected their daytime interactions. Additionally, they noted that sleep deprivation adversely influenced their decision-making regarding their child's medical care. included

4. In a systematic integrative review conducted by Borghild et al. (2019) using EMBASE, MEDLINE, and PsycINFO; while period restricted from 1 January 2007 to 1 April 2019 on ***“Parents' experience and perception of sleep when they stay overnight in the hospital together with their sick children”***. The study included a total of 15 original peer-review studies which varied in their origin, objectives, design; methods employed, and sample size. While systematic review meets the inclusion criteria. The reviewers identified three main themes: sleep quality, factors affecting sleep, and the consequences of sleep loss. It was discovered that both combined psychological factors, such as stress, anxiety, worries, and difficult thoughts, as well as isolated psychological factors, influence parents' sleep. Moreover, environmental and social factors, including privacy and caring for the family, were pinpointed as having an impact. The reviewers revealed that the study's observational design limits the confidence level in the size of the effect estimated. therefore, the study concludes that the need for a comprehensive evaluation of the factors contributing to sleep deprivation and insufficient sleep in parents who stay overnight in the hospital with their hospitalized child during challenging times is of utmost importance, as inadequate sleep can harm parents' psychological well-being. It is vital to generate a theory of substance to explicate the significance of sleep for parents during challenging situations like their children's hospitalization (Løyland et al., 2020). A study was conducted earlier in Nordic countries, which are categorized as high-income nations. This setting highlights the importance of the present research, which is intended to be executed in Iran to explore the mental health of parents in middle-income countries.

5. Taking into consideration assessing the effectiveness of children's illness on parents, in a systematic review study conducted by Abela et al. (2019) on ***“the Impact of paediatric critical illness and injury (PICU) on families”***, using PubMed, CINAHL, and PsycINFO, on January 2019 and repeated in June 2019. The study included 1509 studies, while 33 had sufficient data for quantitative synthesis and met the inclusion criteria. The result shows that Parents

frequently exhibit physical, emotional, and psychological responses, which can be recognized as soon as 24 hours following admission and may endure for several years beyond the PICU discharge date. The reviewers stated that the observational nature of the study designs limits the confidence level in the size of the effect estimated. Since there were only three major databases included in the literature search, it's possible that articles in other databases were overlooked. Clinical guidelines, dissertations, and publications of studies with mixed samples were also excluded because admission to the PICU was unclear. The majority of the studies analysed were conducted only on parents. While this makes the findings transferable, the perspective of siblings is still unknown. The review only includes families of PICU survivors. As a result, the experiences of bereaved families prior to the child's death are missing, which may have helped clarify the family's experience (Abela et al., 2020). The systematic review indicated that parents endure adverse consequences due to their child's admission to the Paediatric Intensive Care Unit (PICU) and the associated exposure to the PICU environment. Acknowledging and comprehending the psychological state of parents, the present study seeks to evaluate the psychological well-being of all children who are hospitalized.

6. In a Cross-sectional descriptive study conducted by Kounthoujam et al. (2021), they aimed to ***“assess the psychological well-being among parents of hospitalized children in selected hospitals of Guwahati, Kamrup (M), and Assam”***. And to discover the relationship between their psychological well-being, selected demographic variables and illness-related variables of their child in India. The study used purposive sampling techniques involving 120 parents of hospitalized children, the study confirms that 62.5% have average psychological well-being, 15% have good quality psychological well-being, and 22.5% of the subjects have poor mental well-being. The study concluded a significant alliance in terms of parents' religion, family stipend, job, and length of hospitalization of the child. However, it is crucial to implement interventional strategies to enhance their psychological wellbeing. Additional studies are necessary to evaluate the efficacy of various approaches that offer psychological, emotional, and practical support to parents, with an emphasis on boosting parental coping resources and alleviating distress during hospitalization. (Devi et al., 2021) This study aims to reproduce previous findings by utilizing a larger sample size that possesses comparable characteristics, thereby improving the generalizability of the results.

7. Correale et al. (2022) conducted a cross-sectional study titled ***“Measuring anxiety and depression in parents of hospitalized children during the COVID-19 pandemic in a pediatric Italian hospital.”*** This research utilized structured interviews to collect data, employing the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder scale (GAD-7). The study involved a sample of 23 Italian parents. The findings revealed that the anxiety score for parents of children with chronic illnesses was 4.43 ± 3.17 , with 39.1% of parents exhibiting anxiety (≥ 5 points). Additionally, the depression score was 4.04 ± 2.67 , indicating that 30.4% of parents displayed depressive symptoms (≥ 5 points). The prevalence of comorbid anxiety and depressive symptoms was found to be 26.1% within the entire sample. The study was pilot study indicate a significant prevalence of anxiety and depressive symptoms, as well as comorbidity, among parents of hospitalized children with chronic illnesses. The study underscores the urgent need for psychological interventions during and following the COVID-19 pandemic to support parents and enhance the recovery and quality of life for their children (Correale et al., 2021). The current study adopts a similar design to the previous research, both being correlational studies that assess parental depression; however, the present study utilized the General Health Questionnaire (GHQ-28) and included a larger sample size of 405 parents from two different pediatric hospital paediatric.

8. In a cohort study conducted by Persson et al. (2023), on ***“NICU parents' mental health: A comparative study with parents of term and healthy infants”***, their objective was to evaluate the mental health of parents who have preterm or ill infants in comparison to parents of healthy term infants both before birth and one month following the hospital discharge in Sweden. The study used a comparative cohort study design involving 923 parents, 439 from six different NICUs, and 484 parents from four maternity units, informed consent taken prior to study, structured interview were used to gather the information by using Short Form (SF-36), Edinburg Postnatal Depression Scale (EPDS), parents were recruited from March 2020 to March 2021, The research indicates that Parents of newborns in Neonatal Intensive Care Units (NICUs) and Maternity Units (MUs) demonstrated similar levels of depressive symptoms. However, parents in NICUs reported going through more traumatic births, rated their birth experiences less positively, faced extended hospital stays, and perceived both their own health and that of their infants as worse during the first week after delivery. A link between traumatic birth experiences and depression was found only among mothers in MUs. Elements such as "family togetherness," parent-infant attachment, and emotional support within the NICU

setting may act as protective factors against developing depression in NICU parents in the short term, as these factors strengthen parental roles, encourage bonding with the infant, and facilitate resilience. Longitudinal studies are necessary to explore the lasting effects of traumatic birth experiences and negative health outcomes on parental well-being. Moreover, additional research concentrating on family dynamics, social support, and parenting practices during the early childhood period of infants born in NICUs is needed to gain a clearer understanding of the difficulties encountered by parents beginning their parenting journey in these environment (Persson et al., 2023). Despite the previous has a large sample low response rate may affect the validity of their findings.

9. A study conducted by Lestari et al in (2023) on ***impact of parental psychological distress on child behavior issues in hospitalized children*** in Indonesia. The primary objective was to determine whether parental psychological distress influences behavioral issues in children during hospitalization. A cross-sectional design was employed, involving 156 parent-child dyads, predominantly mothers, recruited via convenience sampling from a public hospital in Jakarta. Data were collected using two validated instruments: the Child Behavior Checklist (CBCL) to assess child behavior problems and the Hospital Anxiety and Depression Scale (HADS) to measure parental psychological distress. Statistical analysis was performed using SPSS version 25, with descriptive statistics and bivariate analysis used to examine relationships between variables. Due to the non-normal distribution of the dependent variable data, a generalized linear model (GLM) was applied to test predictive assumptions. To standardize scores across different age groups, the T-score of children behavior problems was utilized. The findings revealed that parental anxiety was a significant predictor of elevated behavioral issues in hospitalized children, including increased total behavior problems, internalizing behaviors (e.g., anxiety/depression), externalizing behaviors (e.g., aggression), somatic complaints, and violent conduct (Lestari et al., 2023). The research offers important insights regarding the link between parental psychological distress and behavioral issues in children within a hospital environment. Nevertheless, the study fails to consider the severity of the child's illness, the duration of hospitalization, or any previous behavioral issues, all of which could independently affect the results. Additionally, the research does not examine how factors such as family income, educational background, or cultural beliefs regarding illness and parenting might influence the relationship between parental distress and child behaviour.

10. Another study conducted by Phiri et al (2024) on ***anxiety, Depressive Symptoms, Health-Related Quality of Life, and Their Associated Factors Among Caregivers of Children with Cancer*** in Malawi. their objective was to assess the prevalence of anxiety, depressive symptoms, health related quality of life and associated factors among caregivers of children with cancer. A cross-sectional study was performed involving 167 caregivers of children diagnosed with cancer in Malawi. A multivariate analysis was carried out to determine the factors influencing anxiety, depressive symptoms, and health-related quality of life (HRQoL). Studies carried out at Kamuzu Central Hospital in Malawi and Queen Elizabeth Central hospital's pediatric wards. Data were gathered from participants using three questionnaires—the 12-Item Short-Form Survey, the Patient Health Questionnaire, and the Generalized Anxiety Disorder-7—and sociodemographic features were measured using a convenience sample of 167 participants. The data were analyzed using SPSS version 26, and descriptive statistics were used to describe the sample and research results. The disparities in the mean scores of anxiety levels, depressive symptoms, and HRQoL across the participants' sociodemographic characteristics were assessed using independent t tests and 1-way analysis of variance. Multiple linear regression analysis was used to determine the relationships between the independent and dependent variables. The study's findings indicated that a substantial percentage of caregivers for children with cancer have moderate to severe degrees of anxiety, depression, and low HRQoL. Religion, job, and the gender of the child were all linked to anxiety. The age, gender, and ethnicity of carers were linked to HRQoL, whereas religion was discovered to be linked to symptoms of depression(Phiri et al., 2024).

However, study does not discuss whether the psychological evaluation methods were culturally adapted or tested for the Malawian environment, which calls into question their suitability and validity in this context. The analysis also failed to account for possible confounding variables, such as socioeconomic status, the stage of the child's cancer, or the caregiver's personal support networks, all of which may have had an impact on the findings.

11. A study carried out by Özgör et al. (2024) focused on ***Anxiety, depression, sleep disorders and quality of life in parents of children with first unprovoked seizure and epilepsy*** in Turkey. The aim was to assess the levels of anxiety, depression, and quality of life in these parents. A cross-sectional study involved 113 parents of children aged between 1 month and 17 years, all of whom had normal neurological examinations and neurodevelopment, and were diagnosed with either their first unprovoked seizure or epilepsy, attended at the Pediatric Neurology

Department, Outpatient Clinic of İnönü University Medical Faculty Hospital during the period from 2021 to 2022. Data collection was executed through four questionnaires: the Beck Depression Inventory (BDI) was used to assess depression levels, the Beck Anxiety Inventory (BAI) for anxiety levels, the Pittsburgh Sleep Quality Index (PSQI) to evaluate sleep quality, and the 36-Item Short-Form Health Survey (SF-36) for quality of life assessment. The data were processed with SPSS version 21.0, summarizing all parameters using descriptive statistics. Participants were categorized into two groups: parents of children who had a single seizure and those whose children had epilepsy. Normal distribution of continuous variables was examined using the Kolmogorov-Smirnov test. The Mann-Whitney U test was applied to compare continuous parameters related to sleep quality, depression, and anxiety between the groups. The Chi-square test was employed for comparing categorical parameters. Relationships among sleep quality, depression, anxiety, and additional parameters were analyzed using the Pearson correlation test. The results of the study revealed moderate to severe levels of depression, anxiety, and sleep quality disorders in both groups of parents, whether their children were diagnosed with epilepsy or had experienced their first unprovoked seizure (Özgör and Cansel, 2024). However data were gathered from a single hospital, which could restrict the applicability of the findings to parents in different healthcare environments. Our study involved multiple hospitals to enhance generalizability.

16. Summary and critique on the studies related to the research subject:

Several kinds of studies have mentioned the parent's mental health of hospitalized children and have found them effectively cope. Various concentrations have also been mentioned with several conclusions being drawn.

Strengths of Persson et al's study include that the statistics they used were appropriate and the greater detail provided on the demographics of the participants. They used logistic regression this helped the power of their ANOVA analysis to compare groups. The participant was actively engaged in the study from the outset, participating in the development of the study's objectives and design, as well as the decision-making process regarding the chosen instruments. Unlike the majority of other studies, Pearson's study included parents who did not speak the dominant language in the country.

Three questions about traumatic birth have yet to be validated as a distinct "instrument." Nevertheless, they have been previously examined in a substantial longitudinal study. Retrospectively, the participants were asked about their pregnancy, birth, and time spent in the

hospital, which might be in the study of Dadipur's et al, the validity of the responses was determined by the extent to which they conformed to socially acceptable or researcher-preferred responses due to the inclusion bias result cannot be generalized.

Based on these studies many identified the gaps on other confounding variable that lead to increased parental stress, The current study provides an insight in different centre to identify various factors. This study is important and relevant because of the increased the investigation and assessment of parent mental health and coping strategy to the extent and that findings can be useful to society.

Chapter 3

Methodology

9. Chapter 3

Methodology

Chapter overview

This chapter details the research design and methodology, including the setting, population, sample (with inclusion/exclusion criteria and sampling method), and sample size. It outlines data collection methods and tools, as well as questionnaire validity and reliability. Furthermore, it describes study implementation, data analysis, ethical considerations, research limitations, and presents a diagram illustrating the research process.

17. Research Design and Methodology:

18. Research Design:

This research was cross-sectional descriptive-correlational quantitative study in which the variables of the mental health of parents and the relationship between relative demographic variables was measured in a group of parents of all ages hospitalized children with any diagnosis. The study was carried out on the parents of hospitalized at Children health centre and Bahrami Hospital in Iran.

19. Research Setting:

The research setting in this study included the all units (General, Surgical, Medical, Emergency Department, PICU, NICU, and etc.) in Children Medical Centre and Bahrami Children Hospital related to Tehran University of Medical Sciences in Tehran, Iran.

20. Research Population

The research population consisted of all parents of the hospitalized children referred to the children's hospitals affiliated with Tehran University of Medical Sciences in Tehran, Iran. Who had Inclusion and did not have exclusion criteria:

21. Parents' inclusion criteria:

1. One or both biological parents accompanying and staying with their child hospitalized in selected children's hospitals affiliated to Tehran University of Medical Sciences
2. Having a child/children hospitalized at least 24 hours after admission and hospitalization
3. Having a hospitalized child of any age, gender and any type of medical diagnosis
4. Willingness to cooperate and participate in the study
5. Proficiency in Persian language

6. Reading and writing literacy in Persian language
7. Ability to communicate
8. Parents without significant cognitive impairments who can independently understand and complete the questionnaire
9. Parents who are unable to understand or complete the questionnaire due to cognitive impairments non-consenting participants.

22. Sampling Method:

The research sample includes parents and their hospitalized children who met study inclusion criteria and referred to the selected children's hospitals (Children Medical Center and Bahrami's Children Hospital) related to Tehran University of Medical Sciences in Tehran. A convenience sampling method was used based on the list of hospitalization over previous 24 hours.

The Children's Medical Centre and Bahrami Children's Hospital bed specifications are listed below:

Children's Medical Center Hospital's Structure and Bed Allocation:

Children's Medical Center Hospital, affiliated with Tehran University of Medical Sciences, is the largest and most specialized pediatric referral hospital in Iran. It has a long history of providing comprehensive tertiary care to children from across the country. The hospital is approved for a total of 428 beds, of which approximately 360 are active and consistently occupied. Each pediatric patient is usually accompanied by one mother during their hospital stay. The hospital complex comprises three main buildings, each of which accommodates a variety of clinical wards and critical care units.

The first building consists of three floors and houses several specialized wards, including hematology with 20 beds, infectious diseases with 27 beds, and nephrology and endocrinology which has 17 inpatient beds alongside 3 additional beds for outpatient infusions. This building also contains the gastroenterology ward with 24 beds and 2 beds designated for liver transplant patients. Critical care services in this building include the Intermediate Intensive Care Unit (IICU) with 12 beds and the Pediatric Intensive Care Unit (PICU) with 10 beds.

The second building is larger, consisting of five floors, and is primarily dedicated to surgical and critical care units. It contains two surgery wards, each with 25 beds, the neurology ward with 18 beds, and the cardiology and pulmonology ward also with 18 beds. The emergency department in this building offers 40 inpatient beds and 7 outpatient emergency beds.

Furthermore, this building includes a comprehensive neonatal and critical care section, which consists of the Neonatal Intensive Care Unit (NICU) with 12 beds, the Emergency Intensive Care Unit (EICU) with 9 beds, the Cardiac Intensive Care Unit (CICU) with 13 beds, and the Operating Holding units (NOH and OH) each with 6 beds. Additionally, there is a Long-Term Monitoring unit (LTM) with 2 beds.

The third building has three floors and hosts several subspecialty wards and transplant services. Among these are the Omid (Hope) ward with 5 beds, the transplant unit with 9 beds, the urology ward with 18 beds, and the immunology ward which includes 17 inpatient beds and 3 beds dedicated to immunoglobulin infusions.

This structured allocation of wards and beds across multiple specialized buildings enables the hospital to provide comprehensive and multidisciplinary pediatric care in an efficient and organized manner.

Bahrami Children's Hospital's Structure and Bed Allocation:

Bahrami Children's Hospital is a specialized pediatric facility with a total approved capacity of 159 beds, of which 138 beds are currently active. The hospital operates multiple clinical wards within a single building consisting of three floors and one ground floor.

The Pediatric Intensive Care Unit (PICU) and Emergency Department are located on the ground floor. The first floor accommodates the Neonatal Intensive Care Unit 1 (NICU 1) and the Surgery Ward. The second floor houses the Internal Medicine Ward 1 (also known as Oncology), Internal Medicine Ward 2, the Neonatal Ward, and Neonatal Intensive Care Unit 2 (NICU 2). The third floor is dedicated to Internal Medicine Ward 3, which also functions as the Infectious Diseases Ward.

Bed distribution across the hospital wards is as follows: Surgery (22 beds), NICU 1 (7 beds), NICU 2 (17 beds), Internal Medicine Ward 1 / Oncology (13 beds), Internal Medicine Ward 2 (20 beds), Internal Medicine Ward 3 / Infectious Diseases (20 beds), Emergency (13 beds), Dialysis Unit (7 beds), Neonatal Ward (10 beds), and PICU (10 beds).

Typically, the hospital has between 70 to 80 pediatric inpatients at any given time, with each child accompanied by one mother during their hospitalization.

23. Sample size:

The sample size is calculated by considering α as type I error maximum equal to 0.05 and the prevalence of depression as the most psychiatric problem equal to 35-40% and precision of measurement equal to 5% and using of below formula calculated as 385 subjects:

$$n = \frac{z^2 \times \hat{p}(1-\hat{p})}{\varepsilon^2}$$
$$n = \frac{1.96^2 \times 0.5(1-0.5)}{0.05^2} = 384.16$$

That z is the z score, ε is the margin of error, N is the population size, $\hat{p}$ is the population proportion, with considering of 5% incompleteness of the data the sample size reaches to 405 subjects (Gharraee et al., 2019).

24. Data collection Method:

Data collected in this study by using questionnaire method. The data collection tool was two questionnaires included: 1. demographic information Questionnaire, and 2. General Health Questionnaire (GHQ-28).

Recruitment began after ethical approval was obtained from the joint research ethics committee of the School of Nursing and Midwifery (FNM) and Rehabilitation at Tehran University of Medical Sciences (TUMS) (IR.TUMS.FNM.REC.1403.003). An official letter of introduction from the dean of FNM at TUMS was then presented to Children's Medical Centre and Bahrami Children Hospital authorities to secure permission for data collection. Parents of hospitalized children meeting the study criteria were then approached, the study's background, aims, and objectives were explained, and informed written consent was obtained. Participants then completed the Demographic questionnaire and the General Health Questionnaire (GHQ-28). The researcher provided guidance as needed during the self-administration of the questionnaires, which took 10-20 minutes each to complete. Completed questionnaires were then collected by the researcher.

In the following section, we will present the data collection tool along with its validity and reliability.

25. Data Collection Instrument

The instrument consisted of two sections: Part 1 gathered demographic information about the participants. This section included 20 closed or short-answer questions related to the demographic information of the parents and the hospitalized child. Participants were asked to complete the questionnaire by marking a cross (×) in the square in front of the closed-answer questions or writing their answers in front of the short-answer questions.

Characteristics of the hospitalized child and their accompanying parent included the following: the parent's relationship with the hospitalized child, age, education level, marital status, occupation, current residence, number of children, family economic status, history of mental disorders or use of psychotropic drugs, history of physical illnesses, and history of acute stress in the past six months (such as a serious accident, natural disasters like floods, earthquakes, and fires, or the sudden death of a loved one). Additionally, factors such as caring for a sick child at home other than the hospitalized child and having insurance were considered. For the hospitalized child, information included the name of the admitting hospital, gender, age, date of admission, reason for admission, duration of current hospitalization, and previous history of hospitalization.

Part 2 of the questionnaire comprised questions from the General Health Questionnaire (GHQ-28), a common screening tool for general health. It contains 28 questions that evaluate the respondent's mental health over the past few weeks, divided into four subscales with seven questions each, focusing on different aspects of overall mental health (Sterling, 2011).

GHQ-28 is divided into four subscales following:

1. Somatic Symptoms (Items 1-7), 2. Anxiety and Insomnia (Items 8-14), 3. Social Dysfunction (Items 15-21), 4. Severe Depression (Items 22-28).
2. Each question in the GHQ-28 asks about the respondent's recent experience of various symptoms or problems. The questions typically follow a format such as: "Have you recently been feeling perfectly well and in good health?" "Have you recently lost much sleep over worry (Goldberg and Williams, 1988).

Respondents answer each question based on a 4-point scale:

1. Not at all,
2. No more than usual,
3. Rather more than usual,
4. Much more than usual.

Interpretation of Scores on the GHQ-28:

There are various methods to score the GHQ-28. One approach is the Likert scale, where each response is rated from 0 to 3, resulting in a total possible score that ranges from 0 to 84. In this scoring system, a total score of 23 or 24 serves as the threshold for identifying the presence of distress (Sterling, 2011).

▪ Likert Method:

Responses are scored 0 for "Not at all."

Responses are scored 1 for "No more than usual."

Responses are scored 2 for "Rather more than usual."

Responses are scored 3 for "Much more than usual."

Total score ranges from 0 to 84.

Subscale Scores. Each of the four subscales can also be scored separately with each subscale having a maximum score of: 0 to 21 Higher scores on any subscale indicate greater issues related to that specific dimension of mental health (Hjelle et al., 2019). Alternatively, the GHQ-28 can be scored using a binary method, where responses are categorized as "not at all" and "no more than usual" scored as 0, while "rather more than usual" and "much more than usual" are scored as 1. In this method, any score exceeding 4 indicates the presence of distress (Sterling, 2011, Neyazi et al., 2024). Analysis of data was done using SPSS version 16.

26. GHQ-28 Questioner's Validity and Reliability

This scale was translated to Farsi by Pavalhang *et al.* and its validity and reliability were confirmed through content validity and internal consistency method was higher than 0.89-0.91 (Nazifi et al., 2013). Nazifi M et al.,2015).

Validity of Instrument:

The questionnaire, initially was valid, underwent further validation through content validity and experts panel. In this way, the Persian version of the instrument was sent to a team of ten experts for review. This team included faculty members from the pediatric and psychiatric departments at the School of Nursing and Midwifery, as well as pediatric specialist from the Children's Medical Center at Tehran University of Medical Science.

Modifications were made with the research team's help, including the addition of questions 9, 11, and 12, and revisions to questions 16, 18, 24, and 28. The demographic questionnaire was also revised and finalized.

Reliability of Instrument:

The initial reliability of the questionnaire was established based on its use in previous studies. To empirically assess internal consistency reliability, Cronbach's alpha coefficient was calculated for both the entire 28-item scale and its four constituent subscales. This analysis ensured that each component reliably measured its intended construct. The results demonstrated excellent internal consistency for the total scale ($\alpha = 0.89$). (Nazifi et al., 2013). However, no additional forms of reliability, such as test-retest, were evaluated in the present study.

27. Study implementation

This research was a quantitative, cross-sectional, correlational, descriptive study. To implement this study, the researcher first sent a request for permission to conduct the study on April 4, 2024, to the Joint Research Ethics Committee of Nursing and Midwifery (FNM) and

Rehabilitation at Tehran University of Medical Sciences (TUMS). Then, on September 28, 2024, the researcher obtained permission to conduct the study. Subsequently, on December 10, 2024, the researcher started implementing the study. After obtaining permission to start data collection, the researcher communicated with the nurse in charge of the ward she gave full cooperation to the researcher, and then the researcher first met the parents whose children were admitted to the children medical centre wards. Then, the researcher explained to them the objectives and aim of her study. All parents who agreed to participate in the study signed the consent form. After signing the consent form, they were given the demographic questionnaires and the General Health Questionnaire. Most of the participants were mothers. That was the case because it was difficult to get fathers during working hours; for that reason, the researcher had to schedule visiting hours and weekends for fathers. However, only a few fathers had time to complete the questionnaires.

Data Collection Challenges and Solutions

One of the primary challenges encountered during data collection was the limited availability of parents to complete the questionnaires, as many were preoccupied with caring for their hospitalized children particularly those with toddlers. To mitigate this issue, researcher provided direct assistance by briefly tending to the child (e.g., holding or comforting them) while the parent filled out the questionnaire. This strategy improved participation rates and ensured that parents could respond thoughtfully without added stress. An additional challenge encountered during data collection involved engaging parents of older children, as some children required attention or became restless while their parents completed the questionnaire. To address this, researcher provided small incentives, such as chocolates and candies, to the children. This approach helped maintain the child's cooperation, allowing parents to focus on providing accurate and thoughtful responses without interruptions. While this strategy improved participation rates, ethical considerations were upheld by ensuring that the incentives were minor, non-coercive, and did not influence the study's integrity.

Another challenge involved participant attrition, where some consented individuals ultimately refused to complete the questionnaire during data collection despite prior agreement. These cases were subsequently excluded from study. While this reflects standard research practice for voluntary participation, it necessitates discussion of potential impacts on sample representativeness.

The data collection was done within three months, from December 12th 2024 to February 27th 2025.

28. Ethical Consideration:

The researcher addressed the following ethical considerations throughout the research:

1. Obtaining approval from the Research Ethics Committee of the School of Nursing and Midwifery & Rehabilitation, Tehran University of Medical Sciences, Iran. (ID: IR.TUMS.FNM.REC.1403.003) (Appendix 1).
2. Obtaining authorization to enter the research field and access study participants by obtaining a permit from the Tehran School of Nursing and Midwifery authorities and presenting it to the hospital authorities. (Appendix 4a & Appendix 4b).
3. Assuring the participants of the absence of danger and physical, psychological, and emotional harm, regarding the non-interventional nature of this study.
4. Introducing the researcher and expressing the purpose of the study to the participants and obtaining their informed consent to participate in the study. (Appendix 2a).
5. Reassuring the parents that their involvement in the study is completely voluntary, that their withdrawal is also voluntary, and that neither they nor their children would suffer any consequences for not participating in the study.
6. Ensuring research participants that their personal information will be kept confidential, that the names and surnames of the participants will not be mentioned during analysis and publishing, and that they will remain anonymous.
7. Presenting the results of the research to the participants and officials, if they wish.
8. Adhering to honesty and justice in sampling, collecting, and analysing data.
9. Compliance with publication ethical principles.
10. Acknowledging the study participants and research field authorities in the written report of the thesis, as well as in any publications and presentations.

29. Safety Considerations:

Assured the research units about the absence of danger and physical, psychological, and emotional harm. Because of the non-interventional nature of this study, there were not any safety concerns about the participants. Written informed consent was secured from all participating parents before data collection. reassured the parents that their involvement in the

study was completely voluntary, that their withdrawal was also voluntary, and that neither they nor their kids would suffer any consequences for not participating in the study also ensured the participants that their information was kept confidential and that the names and surnames of the study units was not be mentioned.

30. Data Analysis:

After data collection, the data were entered into SPSS version 16 and analyzed using descriptive and inferential statistics. Normality of continuous or discrete variables was assessed via histogram and Shapiro-Wilk test. For normally distributed quantitative variables, mean and standard deviation were reported; for non-normal variables, median and range were used. Frequency and percentage described demographic and other variables. Independent t-tests compared quantitative variables between two groups, while one-way ANOVA was used for three or more groups. Given the near-normal distribution of GHQ-28, univariate and multiple linear regression (MLR), and linear regression models assessed its association with other variables, reporting B and standardized Beta coefficients as effect sizes, with significance set at $p < 0.05$. All tests were two-tailed.

Results will be presented in tables and graphs in the Chapter 4.

31. Limitations of the study:

There are some limitations to the study self-report scales introduces potential limitations regarding the accuracy and objectivity of the data collected. Participants' subjective responses, influenced by factors such as recall bias or social desirability, may not fully reflect their true experiences or behaviours.

Furthermore, the psychological states of the participants at the time of completing the self-report measures could further compromise the validity of the findings. These factors collectively limit the extent to which the study's results can be confidently generalized to broader populations or applied to different contexts.

Another significant limitation of the study is employed a convenience sample instead of the proposed random sample. This methodological deviation significantly limits the generalizability of the results.

Moreover, the results may predominantly relate to particular hospital environments examined, which restricts their applicability to different healthcare situations. Another limitation is that most of the participants were mothers, despite the study's goal was to include all parents, leading to a lack of representation of fathers.

Chapter 4

Results and Findings

10. Chapter 4: Results and Findings

In this chapter, the results of data analysis from questionnaires completed by 405 parents (376 mothers and 29 fathers) of children hospitalized in selected children's medical centres of Tehran University of Medical Sciences (Children's Medical Centre Hospital and Bahrami Children's Hospital) will be presented. The results related to the study's general objective, specific objectives, and the research demographic variables are summarized and arranged in a total of 27 tables at the beginning of the chapter, the demographic characteristics of the participants, arranged in Tables 4-1 through 4-14, will be displayed. Then, the results related to the general objective and specific objectives of the study specifically, the main variable, namely, general mental health and its subscales (somatic symptoms, anxiety and insomnia, social dysfunction, and severe depressive symptoms) as well as the relationship of these variables with the demographic variables, will be presented. These results are also arranged and will be displayed in Tables 4-15 through 4-27.

Study General and Specific Objectives

General Objective:

Determining the general mental health of parents of children hospitalized in medical centres 'affiliated with the Tehran University of Medical Sciences in 2024.

Specific Objectives:

1. To determine the somatic symptoms related to the general mental health of parents of hospitalized children.
2. To determine the anxiety and insomnia levels of the general mental health of the parents of hospitalized children.
3. To determine the social dysfunction or general mental health of the parents of hospitalized children.
4. To determine the severity of general mental health depression among parents of hospitalized children.
5. To determine the total score of the general mental health of parents of hospitalized children.
6. To determine the relationship between the general mental health of parents and relative demographic variables.

1.1.1 Tables and results

Demographic characteristics of study-participants

Table 4.-1: Frequency distribution of Parents studied in terms of relationship with hospitalized child

Relationship with hospitalized child	Frequency(N)	Percentage (%)
Father	29	7.2
Mother	376	92.8
Total	405	100

The table above shows that this study included 405 participants and also reveals that majority of the participants were mothers (Mothers 92.8%, N = 376).

Table 4-1: Frequency distribution of Parents studied in terms of participant's educational level

Educational Level	Frequency(N)	Percentage %
Under Diploma	82	20.2
Diploma	153	37.8
Associate degree	49	12.1
Bachelor	87	21.5
Master or Higher	34	8.4
Total	405	100

The table above shows that majority of the participants had a diploma (37.8%, N = 153) and the minority had masters or higher education (8.4% N=34).

Table 4-2: Frequency distribution of parents studied in terms of participant's marital status

Participant's marital status	Frequency(N)	Percentage %
Married	401	99.0
Divorced	2	0.5
Widow	1	0.25
Others	1	0.25
Total	405	100

The table above shows that majority of the participants were married (99.0%, N = 401) and the minority were widow (0.25, N=1).

Table 4-3: Frequency distribution of parents studied in terms of parent's occupation

Parent's occupation	Frequency (N)	Percentage (%)
Unemployed	3	0.7
Housekeeper	322	79.5
Employee	51	12.6
Self-employed	25	6.2
Other	4	1.0
Total	405	100

The table above shows that the majority of the participants were housekeepers (79.5%, N = 322) and minority were self-employed 6.2%, N=25).

Table 4-4: Frequency distribution of parents studied in terms of participant's current residence

Current residence	Frequency(N)	Percentage (%)
Urban	384	94.8
Rural	21	5.2
Total	405	100

The table above shows that the majority of the participants resided in the city (94.8%, $N = 384$).

Table 4-5: Frequency distribution of Parents studied in terms of participant's number of children

Number of children	Frequency (N)	Percentage (%)
One	160	39.5
Two	182	44.9
Three or More	63	15.6
Total	405	100

The table above shows that the majority of the participants had two children (44.9%, N = 182) while the minority had three or more children (15.6% N=63).

Table 4-6: Frequency distribution of study-participating parents in terms of their economic status

Family economic status	Frequency(N)	Percentage (%)
Low	38	9.4
Average	287	70.9
Good	75	18.5
Excellent	5	1.2
Total	405	100

The table above shows that the majority of the participants had an average economic status (70.9%, N = 287) and minority had excellent (1.2%, N=5).

Table 4-7: Frequency distribution of study-participating parents in terms of their health conditions

	Frequency distribution	Frequency (N)	Percentage (%)
Current Psychological Disorder	No	384	94.8
	Yes	21	5.2
Total		405	100
Current Psychological Disorder	No	367	90.8
	Yes	37	9.2
Total		405	100
Acute Stress Exposure (Last 6 Months)	No	367	90.8
	Yes	37	9.2
Total		405	100

The table above shows that the majority of participants in the study did not recently have psychological disorders (94.8%, N = 384) or physical illnesses (90.8%, N = 367), nor had they been exposed to acute stress in the past six months (90.8%, N = 367).

Table 4-9: Frequency distribution of participants in terms of other patient care

Other patient care	Frequency (N)	Percentage (%)
No	384	94.8
Yes	21	5.2
Total	405	100

The table above show the majority of the participant had no other patient care (94.8 N= 384).

Table 4-10: Frequency distribution of participants in terms of their insurance coverage

Insurance coverage	Frequency (N)	Percentage (%)
No	42	10.4
Yes	363	89.6
Total	405	100

The table above shows that the majority of the participants had insurance coverage (89.6 %N = 363).

Table 4-11: Frequency distribution of participants in terms of their child admitted hospital

Child admitted hospital	Frequency(N)	Percentage (%)
Children's Medical Center Hospital	203	50.2
Bahrami's Children Hospital	202	49.8
Total	405	100

The table above shows that the majority of participants were from the Children's Medical Centre Hospital (50.2%; N = 203).

Table 4-12: Frequency distribution of participants in terms of their hospitalized child's gender

Child's gender	Frequency (N)	Percentage (%)
Female	180	44.4
Male	225	55.6
Total	405	100

The table above shows that the majority of the participants' hospitalized children's genders were male (55.5%, N = 224).

Table 4-13: Frequency distribution of participants in terms of their child's hospitalization reasons

Child's hospitalization reasons	Frequency (N)	Percentage (%)
Seizure	52	12.8
Heart Diseases	34	8.4
Fever	29	7.2
Infection	27	6.7
Jaundice	23	5.7
Leukemia	20	4.9
Appendix	17	4.2
Brain Tumor	15	3.7
Cerebral Palsy	14	3.4
Hydrocephalus	12	3.0
Others	162	40%

The table indicates that the most frequent cause of admission is seizure then heart disease. 40% of the participant the reason of admission was not determined.

Table 4-14: Frequency distribution of parents in terms of their Child's previous history of hospitalization

Child's previous history of hospitalization	Frequency (N)	Percentage (%)
No	174	43.0
Yes	231	57.0
Total	405	100.0

The table above shows that the majority of the study participants' children had a previous history of hospitalization (57.0%, N = 231).

Chapter 4: Results related to the main and specific objectives of the study (general mental health and its domains)

Table 4-15: Frequency distribution and statistical indicators of participants in terms of general mental health and its subscales

Frequency and statistical indicators	N	Mean± SD
General Mental Health and it's subscales		
Somatic symptoms	405	11.5±3.0
Anxiety/insomnia	405	12.3±4.0
Social dysfunction	405	13.0±3.9
Severe depression	405	9.9±2.9
Total Score of General Mental Health	405	46.7±9.7

*SD= Standard Deviation

The table above shows the mean score of general mental health and its subscales somatic symptoms 11.5±3.0, anxiety /symptoms 12.3±4.0, social dysfunction 13.0±3.9, and severe depression 9.9±2.9. The mean score of total General Mental Health was 46.7±9.7

Table 4-16: The mean of GHQ-28 and its subscales scales among mothers and fathers of the admitted children; using independent t-test

General Mental Health and it's subscales	Frequency and statistical indicators Relationship-with hospitalized child	N	Mean	STD	T statistic	P value
Somatic symptoms	Father Mother	29 376	11.7 11.4	4.0 2.9	.359	.722
Anxiety and insomnia	Father Mother	29 376	12.0 12.2	3.7 4.0	-.291	.771
Social dysfunction	Father Mother	29 376	11.9 13.2	5.0 3.8	-1.275	.212
Severe depression	Father Mother	29 376	10.5 9.9	3.7 2.8	.920	.365
GHQ-28 Total Score	Father Mother	29 376	46.3 46.8	12.2 9.6	-.279	.781

Comparing the mean of general mental health and its subscales across the father and mothers, who participated using independent t-test

The above table shows that there is not statistically significant different between total scores of GHQ-28 and scores of subscales between fathers and mothers.

Table 4-17: The mean of GHQ-28 and its subscales scores among educational level groups, using one-way ANOVA

	Educational level					
		N	Mean	STD	F statistic	P value
Somatic Symptoms	Under diploma	82	10.5	2.6	5.376	<.001
	Diploma	153	11.6	3.0		
	Associate degree	49	12.5	2.5		
	Bachelor	87	12.3	2.6		
	Masters or higher	34	10.6	4.6		
	Total	405	11.5	3.0		
Anxiety and insomnia	Under diploma	82	11.6	3.7	4.369	.002
	Diploma	153	12.4	4.0		
	Associate degree	49	13.7	3.9		
	Bachelor	87	12.7	3.5		
	Masters or higher	34	10.4	5.2		
	Total	405	12.3	4.0		
Social dysfunction	Under diploma	82	12.3	4.0	3.066	.017
	Diploma	153	12.9	4.0		
	Associate degree	49	13.2	4.1		
	Bachelor	87	14.2	2.9		
	Masters or higher	34	13.0	4.6		
	Total	405	13.0	3.9		
Severe Depression	Under diploma	82	9.5	2.7	3.295	.011
	Diploma	153	10.2	3.0		
	Associate degree	49	10.9	2.5		
	Bachelor	87	9.6	3.0		
	Masters or higher	34	9.0	2.9		
	Total	405	9.9	2.9		
Total	Under diploma	82	43.9	9.0	5.576	<.001
	Diploma	153	47.0	10.1		
	Associate degree	49	50.2	9.7		
	Bachelor	87	48.6	7.6		
	Masters or higher	34	43.2	11.9		
	Total	405	46.8	9.8		

Comparing the mean of general mental health and its subscales across the educational level of the participant using one way ANOVA. The above table presents that there was a statistically significant different means of GHQ-28 and its subscale score between various education groups of parents

Table 4-18: The mean of GHQ-28 and its subscales scores among marital status groups, using one-way ANOVA

	Marital status					
		N	Mean	STD	F statistic	P value
Somatic Symptoms	Married	401	11.5	.0	3.437	.017
	Divorced	2	10.5	2.1		
	Widow	1	11.0	.		
	Others	1	2.0	.		
	Total		11.5	3.0		
Anxiety and Insomnia	Married	401	12.3	4.0	4.20	.738
	Divorced	2	10.5	5.0		
	Widow	1	9.0	.		
	Others	1	14.0	.		
	Total	405	12.3	4.0		
Social dysfunction	Married	401	13.0	3.9	.081	.970
	Divorced	2	13.0	.0		
	Widow	1	13.0	.		
	Others	1	15.0	.		
	Total	405	13.0	3.9		
Severe Depression	Married	401	9.9	2.9	.204	.894
	Divorced	2	8.5	.7		
	Widow	1	11.0	.		
	Others	1	10.0	.		
	Total	405	9.9	2.9		
Total	Married	401	46.8	9.8	.272	.846
	Divorced	2	42.5	3.5		
	Widow	1	44.0	.		
	Others	1	41.0	.		
	Total	405	46.7	9.8		

Comparing the mean of general mental health and its subscales across the marital status of the participant using one way ANOVA.

The table above presents the results that there was a statistically significant different means of GHQ-28 and its subscale score across parent's marital status.

Table 4-19: The mean of GHQ-28 and its subscales scores among occupational status groups, using one-way ANOVA

	Participant's Occupation					
		N	Mean	STD	F statistic	P value
Somatic Symptoms	Unemployed	3	5	5	7.193	<.001
	Housekeeper	322	2.9	2.9		
	Employee	51	2.2	2.2		
	Self-employed	25	3.8	3.8		
	Others	4	5.2	5.2		
	Total	405	3.0	3.0		
Anxiety and Insomnia	Unemployed	3	9.3	5	1.076	.368
	Housekeeper	322	12.2	3.9		
	Employee	51	12.7	4.2		
	Self-employed	25	12.0	4.2		
	Others	4	9.5	4.7		
	Total	405	12.2	4.0		
Social dysfunction	Unemployed	3	6.0	5.2	2.811	.025
	Housekeeper	322	13.1	3.8		
	Employee	51	13.2	3.8		
	Self-employed	25	12.6	4.1		
	Others	4	12.2	5.1		
	Total	405	13.0	3.9		
Severe Depression	Unemployed	3	8.0	1.8	1.189	.315
	Housekeeper	322	10.0	2.9		
	Employee	51	10.0	2.7		
	Self-employed	25	9.0	3.1		
	Others	4	8.5	2.5		
	Total	405	9.9	2.9		
Total	Unemployed	3	32.7	7.2	3.757	.005
	Housekeeper	322	46.8	9.9		
	Employee	51	49.2	7.3		
	Self-employed	25	44.4	8.5		
	Others	4	37.5	16.8		
	Total	405	46.8	9.8		

Comparing the mean of general mental health and its subscales across the occupation of the participant using one way ANOVA.

The above table presents that there was a statistically significant different means of GHQ-28 and its subscales, scores social dysfunction and somatic symptoms between various occupational status groups of parents, but there were no anxiety and severe depression scores.

Table 4-20: The mean of GHQ-28 and its subscales scores among economic status groups, using one-way ANOVA

	Economic Status					
		N	Mean	STD	F statistic	P value
Somatic Symptoms	Low	38	11.1	2.2	.708	.548
	Average	287	11.5	3.1		
	Good	75	11.8	3.0		
	Excellent	5	10.2	1.0		
	Total	405	11.5	3.0		
Anxiety and insomnia	Low	38	11.8	3.7	.827	.479
	Average	287	12.4	4.0		
	Good	75	12.2	4.1		
	Excellent	5	10.0	1.7		
	Total	405	12.3	4.1		
Social dysfunction	Low	38	11.9	3.5	3.220	.023
	Average	287	13.0	4.0		
	Good	75	14.0	3.3		
	Excellent	5	15.0	2.6		
	Total	405	13.0	3.9		
Severe Depression	Low	38	9.9	2.7	.700	.552
	Average	287	9.9	3.0		
	Good	75	10.1	2.3		
	Excellent	5	8.2	1.0		
	Total	405	9.9	2.9		
Total	Low	38	44.7	9.0	1.256	.289
	Average	287	46.7	10.4		
	Good	75	48.1	7.7		
	Excellent	5	43.4	3.3		
	Total	405	46.8	9.8		

Comparing the mean of general mental health and its subscales across the economic status of the participant using one-way ANOVA.

The above table presents that there was not a significant different means of GHQ-28 and its subscale score except social dysfunction between various economic status groups of parents

Table 4- 21: The mean of GHQ-28 and its subscales scales among current resident groups of the admitted children; using independent t-test

	Current Residence			
			Mean st - deviation	T statistics -P value
Somatic Symptoms	Urban	384	11.5±3.0	1.702/.090
	Rural	21	10.4±2.9	
Anxiety and insomnia	Urban	384	12.3±4.0	1.115/2.65
	Rural	21	11.3±4.0	
Social dysfunction	Urban	384	13.2±4.0	2.685/.008
	Rural	21	10.9±4.5	
Severe Depression	Urban	384	9.9±2.9	.261/.794
	Rural	21	9.8±2.8	
Total	Urban	384	47.0±9.7	2.124/.034
	Rural	21	42.4±10.0	

The above table presents that there was a significant different in means of GHQ-28 and social dysfunction scores between current resident groups and these scores were higher in group lived in urban region in compare to group lives in rural region, using t-independent test.

Table 4 -22: The mean of GHQ-28 and its subscales scales among different health condition groups; using independent t-test.

	Participants' Health Condition					
	Psychological Disorder					
		N	Mean	St- deviation	T Statistics	P Value
Somatic Symptoms	No	384	11.4	3.0	-2.631	0.009
	Yes	21	13.1	2.7		
Anxiety and insomnia	No	384	12.2	4.0	-1476	0.141
	Yes	21	13.5	3.4		
Social dysfunction	No	384	13.1	3.9	-172	0.864
	Yes	21	13.0	2.7		
Severe Depression	No	384	9.8	2.9	-2.841	0.005
	Yes	21	11.7	2.2		
Total GHQ-28	No	384	46.5	9.8	.248	0.029
	Yes	21	51.3	7.7		
	Physical Illness					
Somatic Symptoms	No	367	11.4	3.0	-1.221	0.223
	Yes	37	12.0	2.5		
Anxiety and insomnia	No	367	12.2	4.0	-746	0.456
	Yes	37	12.8	3.6		
Social dysfunction	No	367	13.0	3.9	.806	0.421
	Yes	37	13.6	3.9		
Severe Depression	No	367	9.8	2.9	-1.819	0.070
	Yes	37	10.8	2.8		
Total GHQ-28	No	367	46.6	9.8	-1.549	0.122
	Yes	37	49.2	8.8		
	Acute Stress Exposure (Last 6 Months)					
Somatic Symptoms	No	367	11.4	3.0	-705	0.481
	Yes	37	11.8	3.2		
Anxiety /insomnia	No	367	12.2	3.9	-.052	0.959
	Yes	37	12.3	4.3		
Social dysfunction	No	367	13.0	3.9	-1.884	0.060
	Yes	37	14.2	3.7		
Severe Depression	No	367	9.8	2.9	-2.662	0.008
	Yes	37	11.1	3.3		
Total-GHQ-28	No	367	46.5	9.8	-1.782	0.076
	Yes	37	49.5	9.6		

The above table presents that there was a significant higher means of GHQ-28 score in the participants with psychological disorders than those had not. Severe depression scores were higher in subjects with psychological disorders and those who had history of acute stress during last 6 months than those had not, using t-independent test.

Table 4-23: The mean of GHQ-28 scores among parents of the admitted children and its subscales between the insurance status groups; comparison by independent t-tests

	Insurance Coverage					
		N	Mean	St-deviation	T statistic	P Value
Somatic Symptoms	No	42	10.2	3.1	-2.840	0.005
	Yes	362	11.6	3.0		
Anxiety and insomnia	No	42	10.8	4.6	-2.752	0.010
	Yes	362	12.5	3.9		
Social dysfunction	No	42	12.6	4.7	-0.800	0.428
	Yes	362	13.2	3.8		
Severe Depression	No	42	9.6	2.6	-0.782	0.435
	Yes	362	10.0	3.0		
Total	No	42	43.2	10.3	-2.544	0.011
	Yes	362	47.3	9.6		

The table above presents the mean of somatic symptoms, anxiety and insomnia, and total GHQ-28 scores higher in the participants had insurance than those had no, using t-independent test.

Table 4-24: The mean of GHQ-28 and its components scores in admitted children and a gender child groups; using independent t-tests

	Gender of Children					
		N	Mean	St-deviation	T statistic	P Value
Somatic Symptoms	Female	180	11.24	3.1	-0.564	0.573
	Male	224	11.6	3.1		
Anxiety and insomnia	Female	180	12.0	4.1	-1.655	0.099
	Male	224	12.6	3.9		
Social dysfunction	Female	180	13.3	4.1	-0.315	0.753
	Male	224	13.2	3.7		
Severe Depression	Female	180	9.9	3.0	0.375	0.708
	Male	224	10.0	3.0		
Total	Female	180	46.4	10.4	-0.862	0.389
	Male	224	47.0	9.2		

The table above presents the results compared means of general mental health and its subscales across Child's gender female in compare to male using independent t test. There was not any significant difference between scores in the participants who had female children and those had male children.

Table 4-25: The mean of GHQ-28 scores among parents of the admitted children and its subscales between positive and negative history of admission the child groups; comparison by independent t-tests

	Child's previous history of hospitalization					
		N	Mean	St deviation	T Statistics	Value
Somatic Symptoms	No	174	11.2	3.1	-1.387	.166
	Yes	231	11.6	2.9		
Anxiety and insomnia	No	174	12.0	3.8	-1.011	.312
	Yes	231	12.5	4.0		
Social dysfunction	No	174	13.3	4.2	.980	.328
	Yes	231	12.9	3.6		
Severe Depression	No	174	9.8	3.0	-.919	.359
	Yes	231	10.0	2.8		
Total	No	174	46.4	10.0	-.718	.473
	Yes	231	47.0	9.6		

The table above presents the results compared means of general mental health and its subscale across Child's previous history of hospitalization in compare to Child with no previous history of hospitalization using independent t test. There is not difference in scores between the participants who their children had previous history of addition and those their children not admitted.

Table 4-26: Association between GHQ-28 scores and characteristics of the parents in univariate linear regression models

Variable		B*	SE**	β ***	P†
Educational level	Under diploma	Reference group			
	Diploma	3.13	1.31	.156	0.02
	Associate Degree	6.41	1.72	.214	0.00
	Bachelor	4.79	1.48	.202	0.00
	Master or higher	-.623	-1.95	-.018	0.75
Relationship with child	Mother/Father	.525	1.89	.014	0.78
Marital status	Married	Reference group			
	Divorce	-4.31	6.93	-.031	0.54
	Widow	-2.81	9.79	-.014	0.78
	Other	-5.81	9.79	-.020	0.55
Parents' Occupation	Unemployed	Reference group			
	Housekeeper	14.1	5.58	.586	0.01
	Employee	16.5	5.72	.564	0.00
	Self-employed	11.69	5.88	.289	0.04
	Others	4.83	7.35	.049	0.51
Current Residence	Urban/Rural	-4.62	-2.18	-.105	0.03
Number of children	One	Reference group			
	Two	.241	1.045	.012	0.82
	Three or more	-4.03	-1.44	-.150	0.00
Economic situation	Low	Reference group			
	Average	2.02	1.68	.094	0.23
	Good	3.42	1.94	.137	0.08
	Excellent	-1.31	4.63	-.015	0.78
Psychological disorders	Yes/NO	4.77	2.18	.109	0.02
Physical disorders	Yes No/	2.60	1.68	.077	0.12
Acute Stress Exposure (past 6 months)	Yes No/	2.98	1.67	.089	0.08
Insurance Coverage	Yes No/	4.01	1.58	.126	0.01

Abbreviations: *B=Coefficient; **SE=Standard Error; *** β =Standardized Coefficient, †P-Value, $p < 0.05$

The above table indicates the association between GHQ-28 scores and characteristics of the participants in univariate linear regression models. As you can see education levels had a positive association with GHQ-28 except master and higher education level. The occupational status also associated except other jobs. Having three or more children negatively associated with GHQ-score. Moreover, having insurance and do have psychological disorder positively associated with GHQ-28 scores.

Table 4-27: Association between GHQ-28 and different characteristics of the parents in multiple linear regression model

Variable[‡]		*B	**SE	***β	†P
Educational Level	Under-Diploma	Reference group			
	Diploma	.470	.415	.078	0.25
	Associate Degree	1.05	.544	.118	0.05
	Bachelor	-.325	.466	-.045	0.48
	Master or higher	-1.06	-.631	-.101	0.09
Relationship with hospitalized Child (Mother/Father)		-.716	.570	-.063	0.21
Marital Status	Married	Reference group			
	Divorce	-1.88	2.04	-.045	0.3
	Widow	1.79	2.89	.030	0.5
	Other	1.14	2.90	-.013	0.70
Current Residence (urban/rural)		-.026	.694	-.002	0.97
Number of Children	One	Reference group			
	Two	0.76	1.04	.039	0.47
	Three	-2.91	-1.46	-.108	0.04
Economic Status	Low	Reference group			
	Average	-.589	-.530	-.092	0.27
	Good	-.272	-.595	-.036	0.65
	Excellent	-1.85	1.38	-.070	0.18
Psychological Disorders (Yes/No)		1.61	.652	.123	0.04
Physical Illness (Yes/No)		.496	.503	.049	0.33
Acute Stress Exposure (past 6 Months) (Yes/No)		1.43	.507	.141	0.00
Insurance Coverage (Yes/No)		.277	.503	.029	0.58

Abbreviations: *B=Coefficient; **SE=Standard Error; ***β=Standardized Coefficient, †P-Value, p< 0.05

[‡] Adjusted for education level, gender of parents, marital status, HX of children's hospital admission, number of children, economic status, existed psychological disorder, existed physical illness, HX of acute stress exposure, and having insurance coverage

The table presents association between GHQ-28 and different characteristics of the parents in multiple linear regression model. Having psychological disorder and had acute stress exposure during past six month associate positively with GHQ-28 scores. Having three or more children is negatively related to GHQ-28 scores.

Chapter 5

Discussion and Conclusion

11. Chapter 5

1.1.2 Discussion and conclusion

Chapter Overview:

In this chapter, we will first discuss and interpret the research findings based on the study objectives. The conclusion based on the research questions will be stated in the following chapter. Then, we will focus on expressing the research message, the application of the research findings in nursing education, clinical practice, management, and research, and finally, suggestions for future research will be presented.

1.1.3 Discussion and interpretation of research findings:

The main purpose of this study was to determine the general mental health of parents of children hospitalized in medical centers affiliated with Tehran University of Medical Sciences in 2024. The study involved 405 parents of hospitalized children from two pediatric hospitals, with 50.2% from the children's medical center and 49.8% from Bahrami. Among the participants, 92.8% were mothers, the majority of whom were married (99.0%), were housewives, and held a diploma had an average economic status and insurance coverage. The total number of children involved was 405, with 55.6% being female and 44.4% male. Most of these children had a prior history of hospitalization, with the predominant reasons for their admissions being seizures and heart diseases. We conducted a comparison of the mean general mental health scores and their subscales across various participant characteristics. This analysis revealed significant differences in the mean scores based on education level, marital status, occupation, economic status, and insurance coverage. That was the same as another study conducted at Indonesia on impact of parental psychological distress on child behaviour issues in hospitalized children. Their result showed most of parent were mothers, married, and housewives (Lestari et al., 2023). Chatzoglou et al. and Tsironi et al. conducted a study in Greece that explained the moderate to high levels of stress experienced by parents. The research indicated a correlation between frequent hospital visits in the past and prolonged hospitalizations of children. However, this study did not identify such significant correlations (Tsironi and Koulterakis, 2018, Chatzoglou et al., 2020).

The findings indicate that the severity of depression was not associated with parental age, educational level, occupation, and child's gender. These findings align with the results of a

prior study conducted by Golraste et al (2014) in Iran with mothers of pediatric leukemia patients. (Kholasehzadeh et al., 2014) However, the association between family economic status and mental health observed in the Iranian study was not replicated in the current study. A potential methodological limitation explaining this absent association is the reliance on self-declared income from parents predominantly employed as daily wage laborers, a group characterized by significant income variability that likely resulted in erroneous reporting. Consequently, the inability to accurately measure this variable may have obscured a true effect .however this finding is consistent with the results of Erkan and Kaplan (2009), who likewise found no statistically significant difference in mental health relative to income(Erkan and Kaplan, 2009).

The results of the study indicated that a majority of the participants reported an increase in their symptoms of anxiety and depression due to their children's hospitalization for chronic illnesses, such as leukemia, heart disease, and seizures. This finding aligns with previous research conducted by Correlea et al. (2022), Phiri et al. (2024), and Sonia et al. (2020).(Correale et al., 2021, Phiri et al., 2024, Graziano et al., 2020). This finding is inconsistent with the research carried out in Poland by Ryzewska et al, (2021) which indicated that parents of hospitalized children did not exhibit symptoms of anxiety or depression due to their child health condition. This is likely attributable to geographical variations and the assessment methods employed (Zdun-Ryżewska et al., 2021).

Another that aligns with the current research was carried out in Turkey by Ozgor and Cansel (2024) to assess the anxiety and insomnia experienced by parents of hospitalized children. The findings indicated that parents of children with epilepsy often exhibit anxiety disorders and sleep disturbances. Furthermore, it has been noted that parents' sleep disturbances were linked to heightened anxiety, pain, and a diminished perception of overall health.(Özgör and Cansel, 2024).

The study's findings indicated that a majority of participants exhibited significant symptoms of social dysfunction, which can be attributed to their child's illness. This illness often limits their activities and diminishes their social support network, leading them to feel estranged from friends, family, and their typical sources of support .This finding was similar to previous study conducted by Kohler et al (2017) which investigated the demographic aspects of mental health in older adults within a context characterized by low income and high prevalence of HIV Research indicated that insufficient social support is a significant predictor of depression, while

assistance from friends positively influences the ability to cope with and surmount challenges (Kohler et al., 2017, Srivastava et al., 2020, Mezgebu et al., 2020).

In the present study, parents have indicated a higher GHQ-28 score. The result aligns with the previous research conducted by Nasab and Moen (2016) in Iran. Research found that most children diagnosed with cancer had parents who reported increased mental health symptoms such as insomnia, both their studies and the present study indicated that mothers exhibited more symptoms than fathers (Nasab and Foroghi, 2016). Conversely, a study by Reinfjell, T., et al. (2009) revealed that fathers reported more symptoms than mothers. This discrepancy may be attributed to the fact that fathers tend to remain more engaged in daily activities despite their child's illness. Such involvement may impact the father's own circumstances and emotional needs, as remaining at home or at work during the child's treatment may prevent fathers from receiving adequate support for their emotional well-being, potentially affecting their subsequent adjustment. (Srivastava et al., 2020).

In the present research, participants diagnosed with psychological disorders exhibited a strong and significantly positive correlation with the GHQ-28 scale. These findings align with previous research indicating that among the 101 parents examined, 61.4% displayed some degree of suicidal tendencies. Furthermore, 86.1% of the parents reported experiencing insomnia, characterized by difficulties in initiating sleep, waking during the night, or awakening in the early morning hours and struggling to return to sleep. Additionally, 32.7% of the parents indicated experiencing somatic anxiety manifested through gastrointestinal symptoms such as indigestion, as well as cardiovascular symptoms including palpitations, headaches, and respiratory issues (Srivastava et al., 2020). Parents of children undergoing cardiac surgery endure considerable stress throughout their hospital stay; prior to the operation, they are particularly susceptible to experiencing heightened levels of stress (Franck et al., 2010).

Furthermore, the results of the study indicated that recent parental stress is significantly correlated with GHQ-28. This finding aligns with previous research conducted by Cottrell et al. (2005), which suggested that parental stressors, such as sleep disturbances, are not only linked to the frequency of seizures in children but also to various quality-of-life aspects, including levels of parental depression, physical health, pain experiences, and emotional well-being. Considering that sleep disturbances are related to numerous adverse outcomes in adults, such as health issues, reduced quality of life, and financial burdens, (Cottrell and Khan, 2005).

This study, although found no such correlation with the economic circumstances of the participants. The study's findings indicate that parents of hospitalized children who have three or more children demonstrate significantly lower GHQ-28 scores, implying that a larger family size may act as a protective factor against psychological distress in high-stress caregiving scenarios. This outcome stands in contrast to earlier research which suggested that parenting stress escalates with an increasing number of children, especially during medical crisis (Adib-Hajbaghery and Ahmadi, 2019). Nonetheless, various psychosocial and resilience-oriented mechanisms could explain this favorable correlation. Numerous studies have indicated that parents with multiple children might gain from more robust familial support networks, which encompass both emotional and practical aid from older siblings or extended family members. Such support can alleviate the psychological strain associated with having a hospitalized child by sharing caregiving duties, thereby allowing parents to engage in greater social interactions, which in turn may reduce their overall burden (Piran et al., 2017, Raina et al., 2005, Hill et al., 2007).

Ultimately, the overall mental health of parents was found to be higher according to the GHQ-28 scale. The parents exhibited somatic symptoms, anxiety, social dysfunction, and severe depression during the hospitalization period. The study's results were significantly correlated with factors such as having only one child, a history of psychological disorders, and recent stress experiences.

1.1.4 Conclusion:

This research examined the somatic symptoms (Mean± SD=11.5±3.0), the anxiety and insomnia (Mean± SD=12.3±4.0), the social dysfunction (Mean± SD=13.0±3.9), the severe depression (Mean± SD =9.9±2.9) and the total score (Mean± SD=46.7±9.7) of the general mental health of the parents of hospitalized children and the correlation between general mental health of parents and demographic variables. Results provide significant insights into the psychological well-being of parents during the challenging time of their child's hospitalization, parents showed measurable mental health symptoms across the GHQ-28 subscales (somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression). About the relationships between parent mental health and their demographic variable result of multiple linear regression model show high in parent with recent stress exposure ($p=0.00$), parent with psychological disorder ($p=0.04$), and parent with one child ($p=0.04$). Parents social support and access to psychological services shown to reduce distress. These findings emphasize the need for integrated, family-centered mental health care in pediatric settings.

1.1.5 Research Message:

Parental mental health Parental mental health serves as a crucial mediator in the pediatric healthcare experience, profoundly influencing both clinical outcomes and the psychosocial adjustment of hospitalized children. This research aims to systematically examine the general mental health status of parents with hospitalized children, arguing that integrating parental psychological support into standard care protocols is essential for optimizing family-centred care and improving holistic recovery trajectories.

1.1.6 Application of the research findings

The findings of this study highlight critical opportunities to enhance support for parents of hospitalized children across multiple domains. In nursing education, the results underscore the need to train pediatric staff in recognizing parental distress through updated curricula and simulation training. For clinical practice, hospitals should implement routine parental mental health screenings, designate quiet spaces for psychological support, and establish clear referral pathways to mental health professionals. Nursing management can integrate parental well-being metrics into quality improvement programs and advocate for family-centered care policies. For nursing research, these findings call for further studies on interventions like parent support groups and their impact on child recovery. Beyond healthcare institutions, the Ministry of Health could use this evidence to develop national guidelines, while media campaigns could

raise public awareness and reduce stigma around parental mental health struggles during pediatric hospitalizations.

Nursing Education:

The outcomes of this research are highly beneficial for nursing education, especially within undergraduate and graduate programs. These findings can be utilized in: Pediatric Nursing Courses as a case example for teaching principles of family-centered care, illustrating the psychosocial effects of child hospitalization on parents. Mental Health Training Modules serve as evidence-based material for understanding the psychological needs of parents and to cultivate skills in employing screening tools (e.g., GHQ-28) in a clinical context. Clinical Simulation Scenarios can be used to educate students on effective communication with parents in distress and to create nursing interventions that cater to both pediatric and parental requirements.

Nursing Practice:

The empirical evidence derived from this investigation yields significant practical applications for pediatric healthcare delivery. Specifically, the findings facilitate the development of evidence-informed protocols to systematically identify and mitigate parental distress within pediatric inpatient settings. Key implementation strategies emerging from the study include: (1) the integration of targeted educational modules to enhance clinical staff's capacity for early detection of parental psychological distress, (2) the establishment of standardized triage pathways for mental health service referrals, (3) the architectural modification of clinical spaces to incorporate therapeutic environments conducive to family support, and (4) the operationalization of parental psychosocial metrics as quality indicators within hospital performance frameworks. Collectively, these multidimensional interventions serve to optimize family-centered care paradigms while simultaneously enhancing health service outcomes for both pediatric patients and their familial caregivers.

Nursing Management:

The findings of this study can assist hospital administrators and nursing leaders in evaluating and revising hospital policies to better support the mental health, well-being, and quality of life of parents during their child's hospitalization. By integrating these insights, healthcare

institutions can develop family-centered care policies, provide targeted psychological support, and improve overall family experiences in pediatric settings. Strengthening these policies may lead to reduced parental stress, enhanced coping mechanisms, and ultimately better patient care outcomes.

Nursing Research:

This study advances nursing science by systematically investigating and addressing previously unexamined dimensions of parental distress during pediatric hospitalization. The findings offer three key contributions to the research literature: First, they provide empirical evidence characterizing the nature and scope of parents' unmet psychosocial needs in acute care settings. Second, they identify modifiable factors that could inform the design of targeted, family-centered support interventions. Third, they reveal critical gaps in current care frameworks that may compromise both parental coping and patient outcomes. These insights create a foundation for subsequent research examining:

- (1) The efficacy of novel psychosocial support models.
- (2) Cultural adaptations of family-centered care approaches, and
- (3) Longitudinal outcomes of parent-focused interventions. The study particularly highlights the need for rigorous evaluation of implementation strategies that bridge research findings with clinical practice. Future investigations should prioritize developing standardized metrics for assessing parental wellbeing and testing scalable intervention models across diverse healthcare contexts.

1.1.7 Recommendations for the further studies:

This study faced challenges in adequately representing fathers' perspectives due to lower participation rates among male parents. Therefore, researcher recommends future research should implement targeted Strategies for Enhancing Father Participation in Studies of Parental Hospitalization Stress to ensure balanced gender perspectives in family-centered care research. The researcher recommends further study should be done on

1. Socioeconomic and Cultural Moderators of Parental Distress during Pediatric Hospitalization: A Demographic Analysis. Future investigations should systematically examine how factors like income, education level, and cultural background influence parents' coping mechanisms and care needs.

2. Comparative Effectiveness of Psychosocial Interventions for Reducing Parental Anxiety in Pediatric Wards. Research should empirically evaluate different support modalities (e.g., counselling vs. peer groups) to establish evidence-based best practices for clinical implementation
3. Mental Health Literacy Outcomes of Parent Education Programs in Pediatric Settings: A Longitudinal Evaluation, Studies should assess how educational interventions affect parents' mental health knowledge, help-seeking behaviors, and long-term coping strategies beyond hospitalization.
4. Future research should aim to implement a more rigorous random sampling technique to enhance the validity and reliability and establish results that are more broadly applicable.

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Appendices

13. Appendices

32. Appendix 1: Research Ethics Committees Certificate



Research Ethics Committees Certificate

Approval ID:	IR.TUMS.FNM.REC.1403.099	Approval Date:	2024-09-16
Evaluated by:	Research Ethics Committees of School of Nursing and Midwifery & Rehabilitation - Tehran University of Medical Sciences		
Status:	Approved		
Approval Statement:	The project was found to be in accordance to the ethical principles and the national norms and standards for conducting Medical Research in Iran. Notice: - Although the proposal has been approved by the Biomedical Research Ethics Committee, meeting the professional and legal requirements is the sole responsibility of the PI and other project collaborators. - This certificate is reliant on the proposal/documents received by this committee on 2024-09-16. The committee must be notified by the PI as soon as the proposal/documents are modified. - Other Comments: - The researcher is required to notify any changes in the approved proposal (such as changes in the title of the research, the names of the principal investigator and collaborators, the methodology and other parts of the proposal) to the Research Ethics Committee and obtain approval.		
Thesis Title:	Examining the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences in 2024.		
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33. Appendix 2a: Consent form in Persian language

فرم رضایت برای شرکت در طرح پژوهشی

عنوان طرح: بررسی سلامت روان عمومی والدین کودکان بستری در مراکز پزشکی کودکان وابسته به دانشگاه علوم پزشکی تهران

در سال 1403

Examining the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences in 2024.

آقای / خانم

بدین وسیله از شما جهت شرکت در پژوهش فوق الذکر دعوت بعمل می آید. اطلاعات مربوط به این پژوهش در این برگه خدمتتان ارائه شده است و شما برای شرکت یا عدم شرکت در این پژوهش آزاد هستید. شما مجبور به تصمیم گیری فوری نیستید و برای تصمیم گیری در این باره می توانید سوالات خود را از تیم پژوهشی بپرسید و با هر فردی که میال باشید مشورت نمایید. قبل از امضای این رضایت نامه مطمئن شوید که متوجه تمامی اطلاعات این فرم شده اید و به تمام سوالات شما پاسخ داده شده است.

مجری پژوهش

1. من می دانم که اهداف این پژوهش عبارتند از:
2. من می دانم شرکت من در این پژوهش کاملاً داوطلبانه است و مجبور به شرکت در این پژوهش نیستم. به من اطمینان داده شده است که اگر حاضر به شرکت در این پژوهش نباشم، از مراقبت های معمول تشخیصی و درمانی محروم نخواهم شد و رابطه درمانی من با مرکز درمانی و پزشک معالج دچار اشکال نخواهد شد.
3. من می دانم که حتی پس از موافقت با شرکت در پژوهش می توانم هر وقت که بخواهم، پس از اطلاع به مجری، از پژوهش خارج شوم و خروج من از پژوهش باعث محرومیت از دریافت خدمات درمانی معمول برای من نخواهد شد.
4. در صورت عدم تمایل به شرکت در پژوهش خدمات معمول (درمانی، تشخیصی و ...) برای من ارائه خواهد شد که منافع و عوارض آن به این شرح است:
5. من می دانم که حتی پس از موافقت با شرکت در پژوهش می توانم هر وقت که بخواهم، پس از اطلاع به مجری، از پژوهش خارج شوم و خروج من از پژوهش باعث محرومیت از دریافت خدمات درمانی معمول برای من نخواهد شد.
6. نحوه ی همکاری اینجانب در این پژوهش به این صورت است:
7. منافع احتمالی شرکت اینجانب در این پژوهش به شرح زیر است:
8. آسیب ها و عوارض احتمالی شرکت در این پژوهش به این شرح است:
8. من می دانم که دست اندرکاران این پژوهش، کلیه اطلاعات مربوط به من را نزد خود به صورت محرمانه نگه داشته و فقط اجازه دارند نتایج کلی و گروهی این پژوهش را بدون ذکر نام و مشخصات اینجانب منتشر کنند.
10. من می دانم که کمیته اخلاق در پژوهش با هدف نظارت بر رعایت حقوق اینجانب می تواند به اطلاعات من دسترسی داشته باشد
11. من می دانم که هیچ یک از هزینه های انجام اقدامات پژوهشی به شرح ذیل بر عهده من نخواهد بود.
12. خانم / آقای به مشخصات ذیل جهت پاسخگویی به اینجانب معرفی شد و به من گفته شد تا هر وقت مشکلی یا سوالی در رابطه با شرکت در پژوهش مذکور پیش آمد با ایشان در میان بگذارم و راهنمایی بخواهم.

آدرس: بیلکیسو کبیر سعید، میدان ولیعصر، خیابان دمشق، پلاک 15، تلفن همراه 09056520428

Bilkisu Kabir Said, Vali asr square, Dameshq street no 15, Cell Phone: 09056520428

13. من می دانم که اگر در حین و بعد از انجام پژوهش هر مشکلی اعم از جسمی و روحی به علت شرکت در این پژوهش برای من پیش آمد درمان عوارض آن و غرامت مربوطه بر عهده مجری خواهد بود.
14. من می دانم اگر اشکال یا اعتراضی نسبت به دست اندرکاران یا روند پژوهش دارم می توانم با کمیته اخلاق در پژوهش دانشگاه علوم پزشکی تهران به نشانی: تهران، تقاطع بلوار کشاورز و خیابان قدس، ساختمان ستاد مرکزی دانشگاه علوم پزشکی تهران، طبقه ششم، اتاق 604 دبیرخانه کمیته اخلاق در پژوهش دانشگاه، تلفن 81633626 تماس گرفته و مشکل خود را به صورت شفاهی یا کتبی مطرح نمایم.
15. این فرم اطلاعات و رضایت آگاهانه در دو نسخه تهیه شده و پس از امضا یک نسخه در اختیار من و نسخه دیگر در اختیار مجری قرار خواهد گرفت.

بیمار / شرکت کننده

و فهمیدم و بر اساس آن رضایت آگاهانه خود را برای شرکت در این پژوهش اینجانب..... موارد فوق الذکر را خواندم.

اعلام می کنم

امضای شرکت کننده

تاریخ

مجری طرح

خود را ملزم به اجرای تعهدات مربوط به مجری در مفاد فوق دانسته و متعهد می گردم در تامین حقوق و ایمنی شرکت کننده در مرضیه حسن پور اینجانب این پژوهش تلاش نمایم

مهر و امضای مجری پژوهش

34. Appendix 2b: Consent form explanation in English

First, a brief description of how to conduct the study will be presented to the sample. Also, the reasons and confidentiality of the information will be explained to the qualified people to enter the study and informed consent form will be obtained from the parents to participate in the study. The data collection tool in this research includes two questionnaires: 1. demographic information, and 2. General Health Questionnaire (GHQ-28). Then the information will be analyzed with SPSS 25 software and using descriptive and inferential statistics. In order to comply with the ethical principles of the study, all people participating in the study are assured that their information will remain confidential with the researcher.

A two-part instrument will be used. Part A. The first part included a demographic questionnaire including questions on the parents and their children's demographic data, such as the parent's age, gender, marital status, education level, job, financial status, having a known physical illness, and the size of their family as well as the duration of the child's disease, having active insurance coverage, and the type of insurance coverage. Part B. The Farsi version of the General Health Questionnaire (GHQ-28) questionnaire will be used as the Second part of the study instrument. The General Health Questionnaire (GHQ-28) is a widely used screening tool designed to detect Mental Health. It consists of 28 questions that assess the respondent's mental health status over the past few weeks. The GHQ-28 is divided into four subscales, each with seven questions, addressing different dimensions of mental health. The GHQ-28 is divided into four subscales: 1. Somatic Symptoms (Items 1-7), 2. Anxiety and Insomnia (Items 8-14), 3. Social Dysfunction (Items 15-21), 4. Severe Depression (Items 22-28). Each question in the GHQ-28 asks about the respondent's recent experience of various symptoms or problems. The questions typically follow a format such as: "Have you recently been feeling perfectly well and in good health"? "Have you recently lost much sleep over worry"? Respondents answer each question based on a 4-point scale: 1. Not at all, No more than usual, 2. Rather more than usual, 3. Much more than usual

The GHQ-28 can be scored using the Likert (0-1-2-3) method.

Likert Method:

- o Responses are scored 0 for "Not at all."
- o Responses are scored 1 for "No more than usual."
- o Responses are scored 2 for "Rather more than usual."
- o Responses are scored 3 for "Much more than usual."
- o Total score ranges from 0 to 84.

Interpretation of Scores: o Scores can be interpreted based on severity, with higher scores indicating more severe symptoms.

Subscale Scores. Each of the four subscales can also be scored separately with each subscale having a maximum score of: 0 to 21

Higher scores on any subscale indicate greater issues related to that specific dimension of mental health.

A higher GHQ-28 overall score points to a higher chance of mental health problems.

This research is a quantitative cross-sectional correlational-descriptive study. The approval and permissions will be obtained from the Research Ethics Committee of School of Nursing and Midwifery & Rehabilitation - Tehran University of Medical Sciences, Iran. Then, researcher will refer to the field of study with a written permission from the head of Tehran School of Nursing and Midwifery (Children's Medical Center and Bahrami Children Hospital). Researcher after entering to research settings, will explain the study aim and method to authorities and relevant hospital's and departments' officials to obtain permission from them then, she will refer to the departments to access the participants in the research (parents of hospitalized children). Then the researcher will introduce herself and the study to the parents who meet the criteria for entering the study and also explains the purpose of the study to them in order to obtain their consent to participate in the study and complete the questionnaires. Then, researcher will distribute self-report questionnaires (Demographic Questionnaire and GHQ-28) to participants and will ask them to complete and return to researcher again

35. Appendix 3a: Cover letter of Data Collection Tool



دانشگاه علوم پزشکی تهران دانشکده پرستاری و مامایی

والدین عزیز

با درود و ادای احترام

اینجانب بیلکیسو کبیرسعید دانشجوی بین الملل کارشناسی ارشد پرستاری کودکان دانشکده پرستاری و مامایی دانشگاه علوم پزشکی تهران در حال انجام پژوهش پایان نامه خود با عنوان "بررسی سلامت روان عمومی والدین کودکان بستری در بیمارستان" تحت راهنمایی سرکار خانم دکتر مرضیه حسن پور، و به مشاوره جناب آقای دکتر شریفی (مشاور آمار)، و سرکار خانم دکتر صالحه تجلی استادان دانشگاه علوم پزشکی تهران می باشم. هدف از این تحقیق تعیین سلامت روان عمومی والدین کودکان بستری در بیمارستان می باشد. با توجه به اهمیت و ارزش نظرات شما والدین گرامی در دستیابی به نتایج واقعی و مطلوب خواشمند است با صرف وقت گرانبهای خود و با دقت نظر پرسشنامه زیر را که در دو بخش شامل بخش اول- مشخصات دموگرافیک والدین و کودکان بستری و بخش دوم- پرسشنامه سلامت عمومی والدین کودکان بستری تنظیم شده است و بیش از 15 تا 20 دقیقه از وقت شما را نخواهد گرفت؛ تکمیل فرمایید. بدیهی است موفقیت در این تحقق در جهت ارتقای سلامت والدین تا حد زیادی بستگی به پاسخ مسئولانه و متعهدانه شما به تمامی سوالات این پرسشنامه دارد.

لازم به یادآوری است که تکمیل پرسشنامه به منزله رضایت شما برای شرکت در این مطالعه می باشد. پرسشنامه فاقد نام و نام خانوادگی و اطلاعات شخصی شما است؛ و نتایج تجزیه و تحلیل بصورت بی نام و با حفظ محرمانگی اطلاعات شخصی شما منتشر خواهد شد. پیشاپیش از شما والد گرامی بابت وقتی که برای تکمیل این پرسشنامه اختصاص دادید صمیمانه تشکر و قدردانی میکنم.

سپاسگزارم

بیلکیسو کبیرسعید

شماره تماس: 09056520428 ایمیل ادرس: BILKISUKABIR2017@GMAIL.COM

دانشجوی کارشناسی ارشد پرستاری کودکان دانشگاه علوم پزشکی تهران

36. Appendix 3b: Data Collection Tool-Demographic Questionnaire

بسمه تعالی

دانشگاه علوم پزشکی تهران

دانشکده ی پرستاری و مامایی – گروه کودکان و مراقبت ویژه ی نوزادان

پرسشنامه بررسی سلامت روان عمومی والدین کودکان بستری در بیمارستان

بخش اول – مشخصات دموگرافیک والدین و کودکان بستری

شرکت در این طرح تحقیقاتی اختیاری است و تمامی اطلاعات محرمانه خواهد ماند.

کد پرسشنامه: تاریخ تکمیل پرسشنامه: / / نام و نام خانوادگی (اختیاری):

لطفا به سوالات ۱ تا ۲۰ با توجه به مشخصات فردی خود و کودکان، به سوالات بسته پاسخ با زدن علامت ضربدر (x) داخل مربع جلوی آن پاسخ دهید. و در سوالات تشریحی پاسخ خود را جلوی آن بنویسید:

مشخصات والد:

۱. نسبت شما با کودک بستری: ☐ پدر ☐ مادر ۲. سن شما: روز ... ماه سال
۳. میزان تحصیلات شما: ☐ زیر دیپلم ☐ دیپلم ☐ فوق دیپلم ☐ لیسانس ☐ فوق لیسانس و بالاتر
۴. وضعیت تاهل: ☐ متاهل ☐ مطلقه ☐ بیوه ☐ سایر موارد نام ببرید:
۵. شغل: ☐ بیکار ☐ خانه دار ☐ کارمند ☐ آزاد ☐ سایر موارد
۶. محل سکونت فعلی شما: ☐ شهر ☐ روستا
۷. تعداد فرزندان: ☐ یک ☐ دو ☐ سه و بیشتر
۸. وضعیت اقتصادی خانواده تان چیست؟ ☐ ضعیف ☐ متوسط ☐ خوب ☐ عالی
۹. آیا به اختلالات روان مبتلا هستید و یا داروی روان مصرف میکنید؟ ☐ خیر ☐ بله (لطفا بنویسید):
۱۰. آیا به بیماری های جسمی مبتلا هستید؟ ☐ خیر ☐ بله (لطفا بنویسید):
۱۱. آیا در طول ۶ ماه گذشته استرس حاد تجربه کرده اید (مانند تصادف جدی، بلایای طبیعی مانند سیل زلزله و آتش سوزی، مرگ ناگهانی یکی از عزیزان و ...) ☐ خیر ☐ بله (لطفا بنویسید):
۱۲. آیا در منزل از کودک بیمار دیگری مراقبت میکنید؟ ☐ خیر ☐ بله (لطفا بنویسید):
۱۳. آیا بیمه هستید: ☐ خیر ☐ بله

مشخصات کودک بستری

۱۴. بیمارستان محل بستری کودک: ☐ بیمارستان مرکز طبی ☐ بیمارستان کودکان بهرامی
۱۵. جنس کودک: ☐ دختر ☐ پسر
۱۶. سن کودک: روز ماه سال
۱۷. تاریخ بستری کودک: روز ماه سال
۱۸. علت بستری کودک (لطفا بنویسید):
۱۹. مدت بستری فعلی کودک: روز ماه سال
۲۰. سابقه قبلی بستری کودک: ☐ دارد ☐ ندارد

37. Appendix 3c: Data Collection Tool-(GHQ-28) Questionnaire

بخش دوم – پرسشنامه سلامت عمومی والدین کودکان بستری (GHQ-28)

والدین گرامی: مامی خواهیم درباره کسالت و ناراحتی‌های پزشکی و این که سلامت عمومی شما در طی یک ماه گذشته تا به امروز چگونه بوده است اطلاعاتی به دست آوریم. به خاطر داشته باشید که ما می خواهیم در مورد ناراحتی های فعلی شما بیشتر بدانیم نه در مورد مشکلاتی که در گذشته داشته اید. بنابراین خواهشمند است در تمام 28 سوال زیر پاسخی را که فکر می کنید با وضع سلامت عمومی کنونی شما بیشتر مطابقت دارد، مشخص کرده و جلوی آن با زدن علامت ضربدر (x) مشخص کنید.

ردیف	سوالات	خیلی بیشتر از حد معمول	بیشتر از حد معمول	در حد معمول	اصلاً
1	آیا از یک ماه گذشته تا به امروز احساس کرده اید که خوب و سالم هستید؟				
2	آیا احساس کرده اید که به داروهای تقویتی نیاز دارید؟				
3	آیا احساس ضعف و سستی کرده اید؟				
4	آیا احساس کرده اید که بیمار هستید؟				
5	آیا سردرد داشته اید؟				
6	آیا احساس کرده اید که سرتان را محکم با چیزی مثل دستمال بسته اید یا اینکه فشاری به سرتان وارد می شود؟				
7	آیا احساس کرده اید که بعضی وقتها بدنتان داغ و یا سرد می شود؟				
9	آیا اتفاق افتاده است که بر اثر نگرانی دچار بی خوابی شده باشید؟				
10	آیا احساس کرده اید که دائماً تحت فشار هستید؟				
11	آیا از یک ماه گذشته تا به امروز عصبانی و بدخلق شده اید؟				
12	آیا بدون هیچ دلیل قانع کننده ای هراسان و یا وحشت زده شده اید؟				
13	آیا احساس می کنید که همه امور از اختیار شما خارج شده اند؟				
14	آیا احساس کرده اید که در تمامی مدت عصبی هستید و دلشوره دارید؟				
15	آیا توانسته اید خودتان را مشغول و سرگرم نگه دارید؟				
16	آیا برای انجام کارها بیش از گذشته وقت صرف کرده اید؟				
17	آیا به طور کلی احساس کرده اید که کارها را به خوبی انجام می دهید؟				
18	آیا از نحوه انجام کارهایتان احساس رضایت می کنید؟				
19	آیا احساس کرده اید که نقش مفیدی در انجام کارها به عهده دارید؟				
20	آیا توانایی تصمیم گیری درباره مسائل را داشته اید؟				
21	آیا قادر بوده اید از فعالیت های روزمره زندگی لذت ببرید؟				
22	آیا فکر کرده اید که شخص بی ارزشی هستید؟				
23	آیا احساس کرده اید که زندگی کاملاً ناامید کننده است؟				
24	آیا احساس کرده اید که زندگی ارزش زنده بودن را ندارد؟				
25	آیا به این مسئله فکر کرده اید که ممکن است دست به خودکشی بزنید؟				
26	آیا احساس کرده اید که چون اعصابتان خراب است نمی توانید کاری انجام دهید؟				
27	آیا به این نتیجه رسیده اید که ای کاش مرده بودید و کلاً از شر زندگی خلاص می شدید؟				
28	آیا این فکر به ذهنتان رسیده است که بخواهید به زندگی تان خاتمه دهید؟				

38. Appendix 3d: Data Collection Tool-Demographic Questionnaire

In the name of God

Tehran University of Medical Sciences

School of Nursing and Midwifery – Department of Paediatrics and Neonatal Intensive Care

Questionnaire on the General Mental Health of Parents of Hospitalized Children

Section 1 – Demographic Information of Parents and Hospitalized Children.

Participation in this study is voluntary, and all information will remain confidential.

Questionnaire Code: _____

Date of Completion: ____ / ____ / ____

Full Name (Optional): _____

Please answer questions 1 to 20 by marking an (×) inside the box for closed-ended questions. For open-ended questions, write your response next to the question.

Parent's Information

Your relationship to the hospitalized child:

☐ Father ☐ Mother

Your age: ____ days ____ months ____ years

Your education level:

☐ Below diploma ☐ Diploma ☐ Associate degree ☐ Bachelor's ☐ Master's or higher

Marital status:

☐ Married ☐ Divorced ☐ Widowed ☐ Other (specify): _____

Occupation:

☐ Unemployed ☐ Homemaker ☐ Employee ☐ Self-employed ☐ Other

Current residence:

☐ Urban ☐ Rural

Number of children:

☐ One ☐ Two ☐ Three or more

Family economic status:

☐ Poor ☐ Moderate ☐ Good ☐ Excellent

Do you have any diagnosed mental disorders or take psychiatric medication?

☐ No ☐ Yes (Please specify): _____

Do you have any physical illnesses?

☐ No ☐ Yes (Please specify): _____

Have you experienced acute stress in the past 6 months? (e.g., severe accident, natural disaster, sudden death of a loved one, etc.)

☐ No ☐ Yes (Please specify): _____

Do you care for another sick child at home?

☐ No ☐ Yes (Please specify): _____

Do you have health insurance?

☐ No ☐ Yes

Hospitalized Child's Information

Hospital where the child is admitted:

☐ Markaz Tebbi Hospital ☐ Bahrami Children's Hospital

Child's gender:

☐ Female ☐ Male

Child's age: ____ days ____ months ____ years

Date of child's admission: ____ / ____ / ____

Reason for hospitalization (Please specify): _____

Current duration of hospitalization: ____ days ____ months ____ years

Previous hospitalization history:

☐ Yes ☐ No

39. Appendix 3e: Data Collection Tool-(GHQ-28) Questionnaire

Instructions:

Dear parents, we would like to understand your general health status over the past month. Please answer all 28 questions by marking (×) the response that best matches your current health condition. Focus on recent issues, not past problems.

no	questions	Much more than usual	Not at all	Same as usual	More than usual
1	Have you recently felt perfectly well and in good health?				
2	Have you felt the need for tonic medications?				
3	Have you felt weak or exhausted?				
4	Have you felt sick or ill?				
5	Have you had headaches?				
6	Have you felt pressure or tightness in your head (e.g., like a band around it)?				
7	Have you experienced sudden hot or cold spells?				
9	Have you lost sleep due to worry?				
10	Have you felt constantly under strain?				
11	Have you felt irritable or bad-tempered?				
12	Have you felt panicky or frightened without reason?				
13	Have you felt like things were out of your control?				
14	Have you felt nervous or anxious most of the time?				
15	Have you been able to keep yourself occupied?				
16	Have you taken longer to do tasks than before?				
17	Have you generally felt capable in your daily activities?				
18	Have you felt satisfied with your tasks?				

- 19 Have you felt useful in your role?
- 20 Have you been able to make decisions?
- 21 Have you enjoyed your daily activities?
- 22 Have you felt worthless?
- 23 Have you felt life is entirely hopeless?
- 24 Have you felt life isn't worth living?
- 25 Have you thought of ending your life?
- 26 Have you felt too nervous to accomplish anything?
- 27 Have you wished you were dead?
- 28 Have you had thoughts of suicide?

40. Appendix 4a: Data Gathering Permission Letter in (C M C) Hospital

تاریخ: ۱۴۰۳/۰۷/۱۷
شماره: ۱۵۰۳/۱۷
1403/11/73/2578
پوسته: ندارد
ساعت: 11:38

بسمه تعالی





وزارت بهداشت، درمان و آموزش پزشکی
سازمان نظام پزشکی
معاونت تخصصی معاینات

جناب آقای دکتر رضا شروین بدو
رئیس محترم مرکز طبیبی کودکان
جناب آقای دکتر سید یوسف میهنی
رئیس محترم بیمارستان بهرامی

با سلام و احترام

به این وسیله سرکار خلم بلقیس کبیر سعید دانشجوی مقطع کارشناسی ارشد رشته پرستاری به شماره دانشجویی ۴۰۱۲۳۸۶۱۰۰۱ به منظور جمع آوری اطلاعات برای تکمیل پایان نامه منسوب خود تحت عنوان "Examining the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences in 2024" با کد اخلاق IR.TUMS.FNM.REC.1403.099 به حضورتان معرفی می گردد خواهشمند است دستور اقدام لازم را مبذول فرمایید.

سرپرست دانشکده
معاونت تخصصی معاینات
تلفن: ۰۲۱۸۱۲۰۰۰۰
۱۴۰۳/۰۷/۱۷

جناب آقای دکتر رضا شروین بدو
معاونت تخصصی معاینات
تلفن: ۰۲۱۸۱۲۰۰۰۰
۱۴۰۳/۰۷/۱۷

سرپرست بیمارستان
معاونت تخصصی معاینات
تلفن: ۰۲۱۸۱۲۰۰۰۰
۱۴۰۳/۰۷/۱۷

جناب آقای دکتر سید یوسف میهنی
معاونت تخصصی معاینات
تلفن: ۰۲۱۸۱۲۰۰۰۰
۱۴۰۳/۰۷/۱۷



۱۴۰۳/۰۷/۱۷

رو نوشت:

۱۴۰۳/۰۷/۱۷

آدرس: تهران، خیابان ولیعصر، پلاک ۱۷۱، طبقه ۳، واحد ۳۰۳
تلفن: ۶۶۹۲۷۱۷۱ - فکس: ۶۶۹۰۴۲۵۲
http://tums.ac.ir

آدرس: تهران، خیابان ولیعصر، پلاک ۱۷۱، طبقه ۳، واحد ۳۰۳
تلفن: ۶۶۹۲۷۱۷۱ - فکس: ۶۶۹۰۴۲۵۲
http://tums.ac.ir

41. Appendix 4b: Data Gathering Permission Letter in Bahrami's Children Hospital

تاریخ: 1403/05/11
شماره: ۱۴۰۳/۷/۱۷
پست: 1403/11/73/2578
ساعت: 11:38

بسمه تعالی

عبدالله محمدی

۸۸

جناب آقای دکتر رضا شروین بدو
رئیس محترم مرکز طب کودکان
جناب آقای دکتر سید یوسف مجتهدی
رئیس محترم بیمارستان بهرامی

با احترام و تشکر

به این وسیله سوکار خاتم بلقیس کبیر سعید دانشجوی مقطع کارشناسی ارشد رشته پرستاری، به شماره دانشجویی ۴۰۱۲۳۸۶۱۰۰۱، به منظور جمع آوری اطلاعات برای تکمیل پایان نامه منسوب خود تحت عنوان "Examining the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences in 2024" با کد اخلاق IR.TUMS.FNM.REC.1403.099 به حضورتان معرفی می گردد. خواهشمند است دستور اقدام لازم را مبذول فرمایید.

سید علی

حضرتان تحقیق بلاغ نام است:

۱) با حضور بیمارستان بهرامی بیمار خانم بهار محمدی معافیت کرد

۲) با حاضرت بیمارستان هاشمی معافیت کرد (مشتق قائم ضامن برامه کرد)

دکتر مهرداد کاود
دانشیار فوق تخصص نور روان
۵۰۷۷۲

42. Appendix 5: Abstract in Persian

چکیده فارسی:

عنوان: بررسی سلامت روان عمومی والدین کودکان بستری در مراکز پزشکی وابسته به دانشگاه علوم پزشکی تهران در سال

1403

مقدمه و هدف: بستری شدن کودک برای والدین بسیار استرس‌زا بوده و می‌تواند باعث بروز مشکلات جدی سلامت روان شود. این مطالعه با هدف تعیین سلامت عمومی روان والدین کودکان بستری‌شده در مراکز درمانی وابسته به دانشگاه علوم پزشکی تهران انجام شد.

روش‌ها و مواد: این مطالعه کمی مقطعی، 405 والد از کودکان بستری‌شده در بیمارستان‌های کودکان وابسته به دانشگاه علوم پزشکی تهران را که به روش نمونه‌گیری در دسترس انتخاب شده بودند، شامل شد. داده‌ها با استفاده از نسخه معتبر و قابل اعتماد فارسی پرسشنامه سلامت عمومی (GHQ-28) و پرسشنامه‌های جمعیت‌شناختی جمع‌آوری شد. تجزیه و تحلیل داده‌ها در نرم‌افزار SPSS نسخه 16 با استفاده از آمار توصیفی و استنباطی، شامل آزمون t مستقل، آنالیز واریانس یک‌طرفه (One-way ANOVA) و رگرسیون خطی تک‌متغیره و چندمتغیره انجام شد و سطح معناداری $p < 0.05$ در نظر گرفته شد.

یافته‌ها: یافته‌های مطالعه نشان داد که اکثر شرکت‌کنندگان را مادران (92.8٪) تشکیل می‌دادند که عمدتاً متأهل (99.0٪) و عمدتاً دارای نقش شغلی خانه‌دار بودند. حدود 37.8٪ دارای سطح تحصیلات دیپلم بودند، در حالی که 70.9٪ وضعیت اقتصادی متوسط و پوشش بیمه گزارش کردند. در مورد کودکان، 55.6٪ پسر بودند و بخش قابل توجهی سابقه بستری قبلی داشتند. علل اصلی بستری، تشنج و بیماری‌های مادرزادی یا اکتسابی قلبی بودند. تحلیل آماری تغییرات معناداری در میانگین نمرات سلامت عمومی روان و زیرمقیاس‌های آن در بین متغیرهای مختلف اجتماعی-جمعیت‌شناختی، از جمله سطح تحصیلات، وضعیت تأهل، نقش شغلی، وضعیت اقتصادی و پوشش بیمه نشان داد. علاوه بر این، تحلیل چندمتغیره، اختلالات روانشناختی والدین ($p = 0.04$)، مواجهه اخیر با رویدادهای استرس‌زای زندگی ($p < 0.001$) و داشتن تنها یک فرزند راجه عنوان پیش‌بین‌کننده‌های معنادار (پیامدهای) سلامت عمومی روان ضعیف‌تر در بین والدین شناسایی کرد.

بحث و نتیجه‌گیری: والدین کودکان بستری‌شده در معرض خطر بالاتری برای مواجهه با چالش‌های سلامت روان هستند. وجود حمایت اجتماعی و دسترسی به خدمات روانشناختی ممکن است پریشانی روانی را کاهش دهد. تحقیقات آینده باید تأثیر

عوامل اقتصادی-اجتماعی و فرهنگی بر راهبردهای مقابله‌ای و نیازهای مراقبتی والدین را بررسی کند. علاوه بر این، به کارگیری روش‌های نمونه‌گیری تصادفی برای افزایش تعمیم‌پذیری و استحکام یافته‌ها توصیه می‌شود.

کلیدواژه‌ها: سلامت عمومی روان، والدین، کودکان بستری‌شده، پژوهش کمی توصیفی



دانشگاه علوم پزشکی تهران
پردیس بین الملل
دانشکده پرستاری و مامایی

"پایان نامه برای دریافت درجه کارشناسی ارشد پرستاری کودکان " در دانشگاه علوم پزشکی تهران

عنوان:

"بررسی سلامت روان عمومی والدین کودکان بستری در مراکز پزشکی وابسته به دانشگاه علوم

پزشکی تهران در سال ۱۴۰۳"

دانشجوی بین الملل:

بیلکیسو کبیر سعید

استاد راهنما:

پرفسور مرضیه حسن پور

استاد مشاور:

دکتر صالحه تجلی

استاد مشاور آمار:

دکتر فرشاد شریفی

سال ۱۴۰۴

شماره پایان نامه:....



Thesis Evaluation Form

First Name: BILKISU	Last Name: KABIR SAID
Program: Master in Pediatric Nursing	School: Nursing and midwifery
Level: M.Sc. ☒ MPH ☐	

Thesis Topic: Examining the general mental health of parents of children hospitalized in Medical Centers affiliated to Tehran University of Medical Sciences in 2024

Date of the Meeting: 13/9/2025 Time: 12 - 13:30

Mark (article mark not included): 18 Article Submitted ☒ Article Accepted/published ☐

Comment:

- ✦ Providing the proof of a submitted article is mandatory for defense.
- ✦ Two marks allotted for an accepted/published article.

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| • Advisors: | 1- _____ | |
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| • Other Examiners: | 1- _____ | |
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| | 3- Karimrad | |
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