## Effectiveness of Eidetic Psychotherapy on Adults with Health Anxiety Symptoms

Sadaf Jalil &
Zoafishan Qureshi
Air University Islamabad

### **Abstract**

The present study aimed to investigate the Effectiveness of Eidetic Psychotherapy in reducing Health Anxiety Symptoms in Adults. A purposive sample of 6 adult participants (3 men, 3 women) was selected after screening 30 individuals (18 to 40 years) using the Short Health Anxiety Inventory (Salkovskis et al., 2002). Eidetic Psychotherapy was used as an intervention. Post-treatment assessment was conducted using the Short Health Anxiety Inventory (Salkovskis et al., 2002). A paired *t*-test and an Independent sample *t*-test in SPSS were used to analyze the data. The results showed a significant difference in health anxiety in post-test scores with a reduction in post-test scores compared to pre-test scores. The results marked Eidetic Psychotherapy as a useful intervention in this area. The results also indicated a significant gender difference in the level of Health Anxiety, with women showing higher levels of Health Anxiety as compared to men.

Keywords: health anxiety, eidetic psychotherapy

Health anxiety is a condition in which a person has excessive concern or worry about their health while having just minor or no symptoms (Salkovskis et al., 2016). It is a frequent mental health issue among young adults, and its incidence is rising worldwide (Asmundson & Taylor, 2018). Individuals' quality of life might suffer because of health anxiety, which can lead to higher healthcare consumption, decreased productivity, and poor social functioning (Fergus et al., 2017). Diagnostic criteria of Illness Anxiety Disorder according to DSM-V include a preoccupation with having or getting a serious disease, even if there are no medical signs (if physical signs are present they are of mild level only), a higher degree of health anxiety, being alarmed regarding one's health, and either excessive and repetitive health behaviours or avoiding the medical services (American Psychological Association [APA], 2013).

The health anxiety involves three key areas. The first one is the disease conviction: a firm belief that one has a serious ailment. Secondly, there is an illness fear: the constant worry of contracting a serious illness, leading to distress. Lastly, there is a bodily preoccupation: a heightened salience of physiological functions, sensations, sources of suffering, and physical restraints. They are subject to extreme examination and critical observation, the purpose of which is to identify the signs of illness (Barsky, 1986; Pilowsky, 1967; 1978; Speckens et al., 1996).

Correspondence concerning this article should be addressed to Sadaf Jalil,

Air University, Islamabad

E-Mail: sadafjalilmalik@gmail.com

Maladaptive behaviours regarding disease involve repetitive self-examinations, continuous reassurance seeking from medical professionals or close ones, and repeated search for similar conditions, signs, and symptoms. With the advancement in technology, the unhealthy use of digital resources for "checking" and reassurance-seeking is described as "Cyberchondria" (Fergus & Dolan, 2014; Fergus & Russell, 2016).

Cyberchondria is a maladaptive behavioural pattern and not a condition (Starcevic et al., 2019) and is common, among people who have higher levels of Health Anxiety (Starcevic & Berle, 2013). According to studies, looking for health information might make people feel more anxious and unclear about their feared disease (Doherty-Torstrick et al., 2016; Singh & Brown, 2016), and leads towards significant impairment in functioning (Doherty-Torstrick et al., 2016). It is also well-recognized that social media has now altered the way people find health information (Li et al., 2018). Because of the abundance of information on social media, anxiety and fear regarding health have increased (Banerjee & Rao, 2020).

The onset of the illness lies between the age ranges of early to middle adulthood (APA, 2013; Rask et al., 2016). Health anxiety is a moderately frequent disorder, with prevalence estimates in the general adult population with a range from 1.3% to 9.4% (Fink et al., 2010). Similarly, emerging evidence on health anxiety depicted that health anxiety in adults of the general population has increased after the pandemic (Bentall et al., 2020), with an increase of almost 10% (Rettie & Daniels, 2020). Several studies have identified traumatic life events, academic or career-related stress, and family or relationship issues as significant risk components for Health anxiety (Fergus et al., 2017; Pinto-Gouveia et al., 2018).

Research depicts that there is a spectrum of Health anxiety ranging from minor to severe (Taylor, 2020). Mild health anxiety is quite prevalent and serves as a potential risk factor for severe levels of health anxiety (Taylor, 2004). Mild levels are also linked to issues such as absence from schools,

over use of healthcare systems, psychiatric comorbidity, and tense interpersonal relationships (Hadjistavropoulos et al., 2011).

Several therapies for health anxiety in young people have been established, including cognitive-behavioral therapy (CBT), medication, and mindfulness approaches. However, there is a need now to identify an alternative treatment approach that can deal with somatic symptoms and traumabased images, be able to deliver quick results and be easily applicable in our culture to expand, improve, and provide a theoretically sound alternative to conventional CBT. Out of this investigation, eidetic image therapy has been discovered to be somatically grounded and more culturally accommodating.

Eidetic psychotherapy, also known as eidetic imagery therapy, is a sort of psychotherapy in which visualization methods are used to assist clients in accessing and processing unconscious emotions and experiences. Akhter Ahsen invented the notion of "eidetic imagery" in 1965 based on his research into children's imagery experiences. Ahsen and colleagues invented eidetic image therapy, which only relies on the elicitation and manipulation of a certain sort of mental imagery that he has dubbed "eidetic," which is defined as, the brilliant and repeating image of lively details (Ahsen, 1965; 1968). Eidetic imagery, in his opinion, is a "normal subjective visual image" with exceptional clarity (Ahsen, 1977; 1984).

ISM (Image, Soma, and Meaning) is the framework on which eidetic psychotherapy is based. A specific somatic, physiological, and emotional reaction (S) to the visual Image (I) precedes its meaning or cognitive consequence (M). The ISM serves as a fundamental unit of information storage; events are automatically recorded in ISM format in the awareness as they occur. These images are multi-level, multisensory, and evidence-based, and they function in the conscious mind as a visual image with a somatic response and a Meaning (ISM) all at once (Ahsen, 1965; 1968; 1977; 1984). According to Dolan (1997), the ISM exhibits specific tripartite patterns that are consistently observed to connect with memories of the actual event. Using the triple code model, Ahsen (1968) tried to explain how psychopathology symptoms develop. We believe that ISM is a repeatable phenomenon. We think that an ISM includes both an experience and a symptom. A person could try to repress his association with a traumatizing event (an ISM) after becoming traumatized by it. However, a suppressed ISM is not suppressed in the conventional dynamic sense; rather, it has pushed back behind the seriality of states. Eidetic therapy focuses on using self-regulatory processes at the conscious level to revive the disrupted picture in the ISM sequence.

Sheikh (2002) explained that in eidetic psychotherapy, there are three major levels of administering the therapeutic process. At the first level, psychosomatic signs of discomfort are addressed. The second level deals with developmental topics, particularly those that pertain to parents. Ahsen (1988) developed two crucial assessment tools for these two levels. He suggested using the Age Projection Test for the first level of Eidetic psychotherapy and created the Eidetic Parents Test for the second level. The third level, however, deals with the individual's integration with the deeper meanings of psychological elements. The purpose of the APT is to investigate incidents connected to the client's present

symptoms to uncover the experiences that shaped them. This method illuminates the causes and deeper meanings of symptoms by eliciting imagery associated with different life experiences through particular test items. Clients imagine a self-image during the APT process and then choose the most vivid one. To help create therapeutic images, they then provide specifics like their age and location in that picture. Conversely, the EPT looks at several facets of pathological development and concentrates on the parent-child relationship. EPT is a 30-item instrument that seeks to provide therapeutic pictures, but it emphasizes comprehending how early connections affect a person's psychological patterns.

Eidetic psychotherapy is useful in the treatment of different psychological diseases such as phobias, depression, eating disorders, and substance misuse (Hill & Hamm, 2019).

Limited studies have validated its usefulness, and further research is required to demonstrate its effectiveness in the treatment of various psychiatric disorders. The goal of the present study was to examine the effectiveness of Eidetic Psychotherapy in reducing Health anxiety symptoms in adults.

## Method

The study was conducted with adults in Islamabad, Pakistan, with the approval of the Air University Human Research Ethics Committee, which adheres to the rules of the World Medical Association Declaration of Helsinki and meets its requirements.

#### Sample

A total of 30 adults were screened using Short Health Anxiety Inventory and among them, 6 adults, (3 men, 3 women) with age range between 18-40 years and with mild to moderate levels of Health anxiety scores on Short Health Anxiety Inventory were purposively selected for the Eidetic Psychotherapy.

## Inclusion criteria

Adults with an age range between 18 to 40 years and with mild to moderate levels of Health Anxiety were included.

## Exclusion criteria

Adults with any other psychological condition, hearing disability, or poor hearing, those taking any other psychiatric medication or undergoing any other Psychotherapy were excluded from the study.

## Instruments

The following instruments were used for data collection,

## Consent form

Written consent was obtained from the participant to ensure their voluntary participation in the study by using an informed consent sheet.

## Demographic sheet

The demographic sheet was used to gather basic sociodemographic information like age, education level, gender, family structure, etc.

# Short Health Anxiety Inventory (SHAI; Salkovskis et al., 2002)

The Short Health Anxiety Inventory (SHAI) includes items that measure health anxiety without regard to one's physical condition. The instrument contains 18 items that assess worry, bodily sensations, and feared consequences of having or acquiring any ailment. It includes a 4-point scale,

with items scored 0–3, with a scale range of 0–42 showing symptoms severity and the last four items measure negative range is from 0-54 with a higher score indicating a higher Health anxiety levels. The SHAI exhibit adequate internal consistency, ( $\alpha$ =.81) and a good test-retest reliability (r=.87). SHAI scores of 0–27 depicted mild health anxiety, 28–32 moderate anxiety, and 33–42 severe Health anxiety (Salkovskis et al., 2002).

### **Procedure**

The research study was conducted in three phases i.e. Phase 1, Phase 2, and Phase 3 (Pre and Post Testing) as indicated in Table 1.

## Phase 1 (Pre Testing)

In the first phase, the Health Anxiety level of the participants was assessed. Thirty participants were screened on the Short Health Anxiety Inventory (SHAI). Out of 30, six participants both males (n=3) and females (n=3) with mild to moderate levels of Health Anxiety score were selected for Eidetic Psychotherapy.

## Phase 2 (Intervention)

In the second phase, intervention was given to check the effectiveness of Eidetic Psychotherapy in reducing Health Anxiety Symptoms among adults. Empirical testing was done with two clients before the therapy sessions. Before the

 Table 1

 Steps of Therapeutic sessions of Eidetic Therapy

consequences with a score range of 0-12. The overall score

intervention, history was taken from the clients, and preliminaries of Eidetic Therapy were fulfilled. Then Eidetic Parent Test was administered to select the image that was used in the intervention. In the intervention phase, the Maneuvering of the image that was selected in the preintervention phase (related to health anxiety) was done upon the requirement. Clients were assigned homework tasks in every session (image-based). Clients were debriefed and feedback from the last session was taken before every new session.

In the Intervention phase, Eidetic Psychotherapy was applied on individuals according to the nature of their problem.

## Phase 3 (Post Testing)

In the last phase, the assessment was done using the Short Health Anxiety Inventory to check Health anxiety levels after Eidetic Psychotherapy was given to the participants.

## Phase IV (Follow-up session)

After six to eight weeks, a follow-up session was conducted to ensure improvement in the client's symptoms.

Phases	Therapy plan	Steps	Description
Phase 1	Pre-assessment	Intake session SHAI****, Body symptoms	A detailed history of client's problem was taken. Score of
		Body symptoms	SHAI before the Therapy and
			Body symptoms reported by
Phase 2	Pre- Intervention	Domnout building	the client were recorded.  4 steps of preliminaries were
Filase 2	Fie- intervention	Rapport building, Psychoeducation, Eidetic	taken. *
		Preliminaries, Composing the	The client was given an
		symptoms	insight into the illness.
			Developing baseline,
	Pre- Intervention	Identifying the body and	understanding the symptoms.  Images were repeated to
	1 Te- Intervention	symptom relationship	heighten the emotional and
		Generating ISM for the	physical symptoms.
		symptoms.	By understanding symptoms
			and locating the problem, triggering images were
			identified.
	Pre- Intervention	Introducing EPT***	For the imagery exercise,
	Sessions 2-4**	EPT items were administered.	EPT was used.
			Image (related to Health Anxiety) was selected for
			maneuvering (Intervention).
	Intervention	Images processing in	Images that were relevant to
	Sessions 6-8	heightened emotional areas.	the situation were noted and
		Maneuvering of images was done depending upon the	oscillation images were formed to improve and settle
		requirement.	the symptoms.
		Clients were assigned	Repeated imagery was done
		homework tasks in every	to improve and check the
		session (image-based). Clients were debriefed and	physical and emotional
		feedback from the last	responses.
		session.	
Phase 3	Post-assessment	SHAI	Scores of SHAI after the

			therapy.
Phase 5	Follow-up	Review symptoms	To check improvement in
		Participants were called for	clients' condition.
		follow-up sessions after two	
		weeks	

<sup>\*4</sup> steps of preliminaries: 1) First report of symptoms. 2) Worry and concerns about the symptoms. 3) Review of symptoms. 4) Patients' various names.

## **Fidelity of the Intervention**

Fidelity of the intervention was ensured by following specific modules in the treatment manual, sufficient brief and training on the said intervention by the clinical supervisor including completion of practice cases and intervention-specific case consultation, and expert review of intervention notes.

#### **Ethical considerations**

The study was subject to certain ethical issues. All the subjects reported written acceptance of their voluntary participation in research through assigned informed consent. Research participants were informed about the objectives of the research and the importance of their voluntary participation in the study. However, they had the right to exit the research at any time. Subjects were assured about the confidentiality of their data and were assured that their information would be used only for research purposes. Other than the aforementioned, no subjects were physically

or mentally mistreated or abused while the research was being conducted.

## **Statistical Analysis**

A Paired Sample *t*-test and an Independent Sample *t*-test were used to analyze the data using Statistical Package for Social Sciences (SPSS).

#### Results

The purpose of this study was to examine the effectiveness of Eidetic Psychotherapy in reducing Health Anxiety symptoms among adults. The Paired sample *t*-test was used to analyze the data to understand the differences in before and after therapy scores. An Independent sample *t*-test was used to identify gender differences in Health anxiety.

Table 2 shows the psychometric properties of the SHAI used. The Cronbach  $\alpha$  value for the Short Health Anxiety Inventory was found to be .84, indicating high Cronbach reliability (>.70) for the scale.

**Table 2**Psychometric Properties of Health Anxiety Inventory Short Version (n=06)

Scale	M	SD	Range		Cronbach's α
			Actual	Potential	•
Short Health Anxiety Inventory	29.66	2.42	27-34	0-54	.84

Note. M= Mean. SD= Standard Deviation. N=6

A Short Health Anxiety Inventory (Salkovsis et al., 2002) is an 18-item scale that measures illness worry, bodily preoccupations, and negative consequences of having any illness on a four point scale ranging from 0 "never" to 3 "most of the time".

Table 3 indicates the percentage and frequencies of demographic variables. The mean age of the participants was 23.83. All of the participants belong to middle socioeconomic status except for one who belongs to an upper-class family.

**Table 3**Demographics

Baseline Characteristics	f	%
Gender	6	
Male	03	50
Female	03	50
Education		
Bachelor	s 04	66
Masters	02	33
Family Structure		
Nuclear	02	33
Joint	04	66

*Note. N*=6.

<sup>\*\*</sup>Step 3 and onward were used interchangeably, depending on the situation.

<sup>\*\*\*</sup>Eidetic Parent Test

<sup>\*\*\*\*</sup>Short Health Anxiety Inventory

The results indicated that there is a significant difference between Pre and Post-test scores, with Post-test scores lower as compared to Pre-test scores. Effect size was

calculated using Cohen's d, resulting in a value of 0.99, which is a large effect, as indicated in Table 4.

**Table 4**Paired Sample t Test Analysis between Pre-test and Post Test Scores on SHAI (N=6)

	Pretest		Posttest		t	p	Cohen's d	95%	6CI
Variables	M	SD	M	SD				UCI	LCI
SHAI	29.33	1.75	13	1.67	29.28	.00	.99	17.76-14.89	

Note. SHAI= Short Health Anxiety Inventory. PRE= Pre-Assessment Phase. POST= Post Assessment Phase. M= Mean. SD= Standard Deviation. N=6 (Males=3. Females=3). CI= Confidence Interval. UCI= Upper Class Interval. LCI= Lower Class Interval. P=<.05.

Table 5 indicates the Paired Sample *t*-test results on Short Health Anxiety Inventory subscales. It indicated a significant difference between Pre and Post-test scores on both the sub-scales with large effect size. The findings depicted that there is a significant difference between Pretest Symptom Severity scores and Posttest Symptom Severity scale scores indicating a reduction in Post-test

scores on the Symptom Severity subscale as compared to Pre-test. Similarly, the results also indicated a significant difference between Pre-test Negative Consequences scores and posttest negative Consequences scale scores, with Posttest scores lower as compared to Pre-test scores on the Negative Consequences sub-scale of SHAI.

**Table 5**Paired Sample t Test Analysis between Pre-test and Post Test Scores on SHAI's subscales (N=6)

	Pretest	Posttest			t	p	95%CI
Variables	M	SD	M	SD			UCI LCI
SS	22.33	1.96	9.16	.98	18.72	.00	14.9 11.3
NC	7.16	.75	3.16	.75	10.95	.00	4.93 3.06

*Note.* SS= Symptom Severity. NC= Negative Consequences. *M*= Mean. *SD*= Standard Deviation. *N*=6 (Males=3. Females=3). CI= Confidence Interval. UCI= Upper Class Interval. LCI= Lower Class Interval. P=<.05.

The results of the Independent sample *t*-test showed that the assumption of homogeneity of variance was found to be assumed as F=3.31, P>.05. Results also indicated that significant gender differences were found in terms of **Table 6** 

Health Anxiety with a large effect size. The results depicted that there is a significant difference between male and female scores, with females having higher levels of Health anxiety as compared to males, as indicated in Table 6.

Mean Comparison of Gender on Health Anxiety (N=30)

	Male		Female		t	P	Cohen's d	95%	6CI
Variables	M	SD	M	SD				UCI	LCI
SHAI	18.73	4.78	28.73	2.43	7.21	.00	2.63	12.84	-7.15

Note. SHAI= Short Health Anxiety Inventory. PRE= Pre-Assessment Phase. POST= Post Assessment Phase. M= Mean. SD= Standard Deviation. N=30 (Males=15. Females=15). CI= Confidence Interval. UCI= Upper Class Interval. LCI= Lower Class Interval. P=<.05.

The findings indicated that there is a statistically significant difference between the mean test scores of the pre and posttest. Specifically, post-test had a lower mean test score than the pre-test scores. The results also showed significant gender differences in terms of health anxiety, as females had higher levels of Health anxiety as compared to males.

## Discussion

The present study was conducted to see the effectiveness of Eidetic Psychotherapy in reducing health anxiety. It was hypothesized that there would be a significant difference in health anxiety symptoms in adults after Eidetic Psychotherapy. The results showed significant differences in Health Anxiety, confirming the hypothesis as true. The results were consistent with the previous studies which showed the effectiveness of Eidetic Psychotherapy

for various psychiatric disorders, such as Trauma (Ehsan & Rowland, 2021), Phobia (Dolan & Sheikh, 1977), Psychosomatic illness (Sheikh & Richardson, 1979), Depression (Kamran & Rowland 2020), Insomnia (Sheikh, 1976) and Intellectual disability (Syed et al., 2020), etc.

The significant difference in pre and post-therapy scores on SHAI (Short Health Anxiety Inventory) with a large effect size suggests promising clinical utility of Eidetic therapy. Our finding is supported by research in the field of neuropsychology. Since different brain areas, such as the Middle Temporal (MT) and Medial Superior Temporal (MST), (Kosslyn, 1994; Goebel et al., 1998) are involved, the emotional system is also influenced and has strong connections to perception, sensory signals, and memory (Holmes & Mathews, 2010). The research explained that imagery has a key part in perpetuating emotional illnesses, has an impact on emotions, beliefs, and behaviours, and may be used to cure psychiatric conditions.

Rational Emotive Behavioural Therapy (REBT) researchers (Lipsky et al., 1980) suggested that imagery therapy is much more beneficial than other approaches and can effectively treat a variety of psychopathologies.

Following pre-assessment, the participants' condition was examined, and it was discovered that the majority of the clients displayed excessive worry about getting sick or contracting any particular disease (depending on the case, for example, cancer, pneumonia, etc.). Along with that, disturbances in their daily lives, restlessness, and irritability, as well as somatic symptoms like headache, nausea, body ache, chest pain, and other similar pains were also reported. Clients have reported experiencing interrupted sleep, irritability, and disruption in everyday activities because of these symptoms. All of these symptoms not only interfere with everyday activities but also with the client's psychological health (Lagoe & Atkin, 2015). Results depicted that mental imagery has a significant impact in reducing a person's symptoms. In Eidetic Psychotherapy, certain techniques like active imagination of problematic situations help a lot in the reduction of bodily symptoms in a shorter period (Ahsen,

In the present study, most clients reported that their anxiety symptoms have affected their daily life functioning as one client reported fear of developing depression. She constantly spends her day searching on the internet about the illness to the level that her studies are disturbed because of this. In addition to that, she has also developed an eyesight issue because of the excessive screen time that she spent on the internet searching for her symptoms (Case 1). One of the clients (Case 2) reported that she was sick and had a lot of somatic symptoms, but no one believed her. Another client (Case 3) reported that she remained excessively worried that she may develop cancer and waste most of the day on the internet searching about this thing. She also visited many doctors and had many medical tests. However, despite the doctor's reassurance, the anxiety remained the same. Other clients also reported similar kinds of problems which resulted in impairment in daily life functioning. The disease can impact the quality of life of a person, including distress, impairment in daily functioning, and increased healthcare utilization (Eilenberg et al., 2016).

Eidetic images play a crucial part in stabilizing the patient's emotional disturbances and bringing about changes in them (Holmes & Mathews, 2010). The current study also showed that Eidetic Psychotherapy is effective in treating health anxiety since patients' physiological and emotional responses improved noticeably. A previous study revealed that mental images are connected to psychological issues because of their unique relationship with emotions and that these mental images are more efficient than verbal representation in treating a variety of psychological issues (Holmes & Mathews, 2010).

The findings of the current study also indicated significant differences that exist in males and females concerning health anxiety, with females having higher levels of health anxiety as compared to males. The high health anxiety levels in females suggest that women have generally higher levels of anxiety than men, and may be linked to biological, cognitive, and sociocultural elements (MacSwain et al. 2009). Additionally, females are

more likely to engage in worry and reassurance-seeking as compared to men, resulting in high health anxiety in them (MacSwain et al., 2009).

Compared to males, females experience higher anxiety levels because of a complicated interaction between social, psychological, and biological elements. Anxiety is greatly influenced by hormone variations, especially those associated with the female reproductive cycle. Serotonin transporter genes are modulated by sex hormones including progesterone and estrogen, which impact serotonin availability and increase anxiety (Songtachalert et al., 2018). When faced with stressors, women tend to express higher levels of negative affect, such as fear, irritation, and perplexity, than men do (Kelly et al., 2008). Because of the combined weight of their professional and home duties, women frequently experience higher levels of stress. This overabundance of roles may result in a diminished sense of personal control, which raises anxiety levels even more (Rosenfield, 1989).

The results demonstrated an improvement in the symptoms as a whole. Based on the results of the current study, Eidetic Psychotherapy can be added to the list of effective psychotherapies for treating Health Anxiety Symptoms among adults.

## Conclusion

This study aimed to find the effectiveness of eidetic psychotherapy on adults with health anxiety symptoms. The findings of our analysis depicted that there was a significant difference in pre-test and post-test scores of health anxiety in adults, proving eidetic psychotherapy is an effective therapy in reducing health anxiety symptoms among adults.

## **Implications**

The study suggests that eidetic psychotherapy is effective in reducing health anxiety symptoms among adults. These findings can be useful for the researchers working in this area as they contribute knowledge in the area. The findings also help the practitioners in using eidetic psychotherapy in conjunction with other forms of therapy for treating health anxiety among adults.

## **Limitations and Suggestions**

The study has several limitations, including excluding severe forms of health anxiety, a small sample size of 18-40 years, and a lack of diversity in demographics. The study's findings suggest a need for more comprehensive research on eidetic psychotherapy's effectiveness on health anxiety in various contexts and samples. Future research should target clinical settings, include severe forms of health anxiety, and include a larger sample size. The current study's limitations suggest that further studies focusing on the effectiveness of eidetic psychotherapy on health anxiety should also consider other demographic variables to determine their impact on the therapy's efficacy. Future research should consider other demographic variables to ensure the study's generalizability.

## References

- Ahsen, A. (1965). Eidetic psychotherapy: a short introduction. Nai Matbooat.
- Ahsen, A. (1968). Basic Concepts in Eidetic Psychotherapy. New York: Eidetic Publishing House.
- Ahsen, A. (1972). Eidetic parents test and analysis:

  A practical guide to systematic and comprehensive analysis. New York: Eidetic Publishing House.
- Ahsen, A. (1977). Psycheye: Self-analytic consciousness: A basic introduction to the natural self-analytic images of consciousness. Eidetics. Brandon House.
- Ahsen, A. (1984). *Image in psychology, art, literature, and politics*. New York: Brandon House.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).
- Asmundson, G. J. G., & Taylor, S. (2018). Health anxiety: Introduction to the special issue. *Journal of Anxiety Disorders*, 55, 1-2. https://doi.org/10.1016/j.janxdis.2018.02.001
- Banerjee, D. & Rao, T. S. S. (2020). Psychology of misinformation and the media: Insights from the COVID-19 pandemic. *Indian Journal of Social Psychiatry*, 36(5), 131-137. DOI: 10.4103/ijsp.ijsp\_112\_20
- Barsky, A. J. (1986). Hypochondriasis. *Archives of General Psychiatry*, 43(5), 493. https://doi.org/10.1001/archpsyc.1986.0180005009901 3
- Bentall, R.G.M.J., Lvita, L., Hartman, T., Martinez, A., Stocks, T., Shelvin, M., Murphy, J., McBride, O., Manson, L., McKay, R., & Hyland, P. (2020). *Initial research findings on COVID-19 and mental health in the UK*.
- Doherty-Torstrick, E. R., Walton, K. E., & Fallon, B. A. (2016). Cyberchondria: Parsing Health Anxiety From Online Behavior. *Psychosomatics*, *57*(4), 390–400. https://doi.org/10.1016/j.psym.2016.02.002
- Dolan, A.T. (1997) Imagery Treatment of Phobias, Anxiety States and Other Symptom Complexes Brandon House, New York.
- Dolan, A. T., & Sheikh, A. A. (1977). Short-term treatment of phobia through eidetic imagery. *American journal of psychotherapy*, 31(4), 595–604. https://doi.org/10.1176/appi.psychotherapy.1977.31.4.5
- Eilenberg, T., Fink, P., Jensen, J. S., Rief, W., & Frostholm, L. (2016). Acceptance and commitment group therapy (ACT-G) for health anxiety: a randomized controlled trial. *Psychological medicine*, 46(1), 103–115. https://doi.org/10.1017/S0033291715001579
- Fergus, T. A., & Dolan, S. L. (2014). Problematic Internet Use and Internet Searches for Medical Information: The Role of Health Anxiety. *Cyberpsychology, Behavior, and Social Networking*, 17(12), 761–765. https://doi.org/10.1089/cyber.2014.0169
- Fergus, T. A., Griggs, J. O., Cunningham, S. C., & Kelley,L. P. (2017). Health anxiety and medical utilization:The moderating effect of age among patients in primary

- care. Journal of Anxiety Disorders, 51, 79–85. https://doi.org/10.1016/j.janxdis.2017.06.002
- Fergus, T. A., Kelley, L. P., Griggs, J. O., & Fordiani, J. M. (2017). Assessment and treatment of health anxiety: A meta-analytic review. *Journal of Psychosomatic Research*, 99, 66-81. https://doi.org/10.1016/j.jpsychores.2017.06.002
- Fergus, T. A., & Russell, L. H. (2016). Does cyberchondria overlap with health anxiety and obsessive-compulsive symptoms? An examination of latent structure and scale interrelations. *Journal of anxiety disorders*, 38, 88–94. https://doi.org/10.1016/j.janxdis.2016.01.009
- Fink, P., Ørnbøl, E. & Christensen, K. S. (2010). The outcome of health anxiety in primary care: a two-year follow-up study on health care costs and self-rated health. *PLos ONE*, *5*, e9873. doi: 10.1371/journal.pone.0009873.
- Goebel, R., Khorram-Sefat, D., Muckli, L., Hacker, H. J., & Singer, W. (1998). The constructive nature of vision: direct evidence from functional magnetic resonance imaging studies of apparent motion and motion imagery. *European Journal of Neuroscience*, 10(5), 1563–1573. https://doi.org/10.1046/j.1460-9568.1998.00181.x
- Hadjistavropoulos, H. D., Janzen, J., Kehler, M. D., Leclerc, J., Sharpe, D., & Bourgault-Fagnou, M. D. (2011). Core cognitions related to health anxiety in self-reported medical and non-medical samples. *Journal of Behavioral Medicine*, 35(2), 167– 178. https://doi.org/10.1007/s10865-011-9339-3
- Hill, E. M., & Hamm, A. (2019). Intolerance of uncertainty, social support, and loneliness in relation to anxiety and depressive symptoms among women diagnosed with ovarian cancer. *Psychooncology* 28, 553–560. doi: 10.1002/pon.4975
- Holmes, E. A., & Mathews, A. (2010). Mental imagery in emotion and emotional disorders. *Clinical Psychology Review*, *30*(3), 349–362. https://doi.org/10.1016/j.cpr.2010.01.001
- Kamran, M., & Rowland, D. L. (2020). Eidetic therapy in the treatment of depression: An exploratory application of an intervention in an emerging nation population. *Professional Psychology: Research and Practice*, 51(5), 527–535. https://doi.org/10.1037/pro0000314
- Kamran, E. M., & Rowland, D. L. (2021). Possible Role for Imagery-Based Therapy in Managing PTSD in Pakistani Women Experiencing Domestic Abuse: A Pilot Study Using Eidetic Therapy. International journal of environmental research and public health, 18(5), 2478. https://doi.org/10.3390/ijerph18052478
- Kelly, M. M., Tyrka, A. R., Anderson, G. M., Price, L. H., & Carpenter, L. L. (2008). Sex differences in emotional and physiological responses to the Trier Social Stress Test. *Journal of Behavior Therapy and Experimental Psychiatry*, 39(1), 87–98. https://doi.org/10.1016/j.jbtep.2007.02.003
- Kosslyn, S. M., & Sancho, G. (1994). Image And Brain. In *The MIT Press eBooks*. https://doi.org/10.7551/mitpress/3653.001.0001
- Lagoe, C., & Atkin, D. (2015). Health anxiety in the digital age: An exploration of psychological determinants of

- online health information seeking. *Computers in Human Behavior*, *52*, 484–491. https://doi.org/10.1016/j.chb.2015.06.003
- Li, Y., Wang, X., Lin, X., & Hajli, M. (2018). Seeking and sharing health information on social media: A net valence model and cross-cultural comparison. *Technological Forecasting and Social Change*, 126, 28-40. https://doi.org/10.1016/j.techfore.2016.07.021
- Lipsky, M. J., Kassinove, H., & Miller, N. (1980). Effects of rational-emotive therapy, rational role reversal, and rational-emotive imagery on the emotional adjustment of community mental health center patients. *Journal of Consulting and Clinical Psychology*, 48(3), 366–374. https://doi.org/10.1037/0022-006x.48.3.366
- MacSwain, K. L. H., Sherry, S. B., Stewart, S. H., Watt, M. C., Hadjistavropoulos, H. D., & Graham, A. R. (2009). Gender differences in health anxiety: An investigation of the interpersonal model of health anxiety. *Personality and Individual Differences*, 47(8), 938–943. https://doi.org/10.1016/j.paid.2009.07.020
- Pilowsky, I. (1967). Dimensions of Hypochondriasis. British Journal of Psychiatry, 113(494), 89–93. https://doi.org/10.1192/bjp.113.494.89
- Pilowsky, I. (1978). A general classification of abnormal illness behaviours. *British Journal of Medical Psychology*, 51(2), 131–137. https://doi.org/10.1111/j.2044-8341.1978.tb02457
- Pinto-Gouveia, J., Carvalho, S. A., Palmeira, L., Castilho, P., & Cunha, M. (2018). The impact of cognitive-behavioral therapy for health anxiety on metacognitive beliefs, intolerance of uncertainty, and emotion regulation strategies. *Journal of Clinical Psychology*, 74(4), 562-574. https://doi.org/10.1002/jclp.22583
- Rask, C.U., Munkholm, A., Clemmensen, L., Rimvall, M.K., Ornbol, E., Jeppesen, P.,& Skovgaard, A.
  M. (2016). Health anxiety in preadolescence associated health problems, healthcare expenditure, and continuity in childhood. *Journal of Abnormal Child Psychology*, 44, 823–832. doi: 10.1007/s10802-015-0071-2
- Rettie, H., & Daniels, J. (2020). The relationship between intolerance of uncertainty, coping styles and mental health difficulties in the UK during the COVID-19 pandemic (unpublished)
- Rosenfield, S. (1989). The effects of women's employment: Personal control and sex differences in mental health. *Journal of Health and Social Behavior*, 30(1), 77–91. https://doi.org/10.2307/2136914
- Salkovskis, P. M., Gregory, J. D., Sedgwick-Taylor, A.,
  White, J. D., Opher, S., & Olafsdottir, S. (2016).
  Extending Cognitive-Behavioural theory and therapy to medically unexplained symptoms and Long-Term Physical Conditions: A Hybrid Transdiagnostic/Problem Specific approach. *Behaviour Change*, 33(4), 172–192.
  https://doi.org/10.1017/bec.2016.8
- Salkovskis, P. M., Rimes, K. A., Warwick, H. M., & Clark,
   D. M. (2002). The health anxiety inventory:
   Development and validation of scales for the

- measurement of health anxiety and hypochondriasis. *Psychological Medicine*, *32*, 843–853. doi: 10.1017/S0033291702005822.
- Sheikh, A. A. (1976). Treatment of insomnia through eidetic imagery: a new technique. *Perceptual and motor skills*, 43(3 pt. 1), 994. https://doi.org/10.2466/pms.1976.43.3.994
- Sheikh, A. A. (2002). *Handbook of therapeutic imagery techniques* (pp. 145-154). Routledge & CRC Press.
- Sheikh, A. A., and Richardson, P. (1969). Mental imagery and psychosomatic illness: A critical review. *Journal of Mental Imagery*, in press.
- Singh, K., Fox, J. R. E., & Brown, R. J. (2016). Health anxiety and Internet use: A thematic analysis. *Cyberpsychology*, 10(2). https://doi.org/10.5817/cp2016-2-4
- Songtachalert, T., Roomruangwong, C., Carvalho, A. F., Bourin, M., & Maes, M. (2018). Anxiety disorders: Sex differences in serotonin and tryptophan metabolism. *Current Topics in Medicinal Chemistry*, 18(19), 1704– 1715.
  - https://doi.org/10.2174/1568026618666181115093136
- Speckens, A. E. M., Spinhoven, P., Sloekers, P. P. A., Bolk, J. H., & Van Hemert, A. M. (1996). A validation study of the Whitely Index, the Illness Attitude Scales, and the Somatosensory Amplification Scale in general medical and general practice patients. *Journal of Psychosomatic Research*, 40(1), 95–104. https://doi.org/10.1016/0022-3999(95)00561-7
- Starcevic, V., & Berle, D. (2013). Cyberchondria: towards a better understanding of excessive health-related Internet use. Expert Review of Neurotherapeutics, 13(2), 205–213. https://doi.org/10.1586/ern.12.162
- Starcevic, V., Berle, D., & Khazaal, Y. (2019). Diagnosis, assessment, and management of health anxiety in the DSM-5 era. *International Journal of Psychiatry in Clinical Practice*, 23(3), 160-167. https://doi.org/10.1080/13651501.2019.1570525
- Syed, A. A., Neelofur, S., Moran, A., & O'Reilly, G. (2020). Investigating the potential clinical utility of therapeutic techniques based on eidetic imagery as adapted by the Eidetic Model of Growth (EMG) for people with intellectual disability (ID). *Heliyon*, 6(10), e05115. https://doi.org/10.1016/j.heliyon.2020.e05115
- Taylor, S. (2004). Understanding and treating health anxiety: A cognitive-behavioral approach. *Cognitive and Behavioral Practice*, 11(1), 112–123. https://doi.org/10.1016/s1077-7229(04)80015-4
- Taylor, S. (2022). The Psychology of Pandemics. *Annual Review of Clinical Psychology*, 18(1), 581–609. https://doi.org/10.1146/annurev-clinpsy-072720-020131

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