



Fear of flying from the experience of wingwave[®] coaches

Background

Our lifestyle today is hardly imaginable without air travel. Flying overcomes long distances and saves time. Nevertheless, approx. 16 % of the German population suffer from fear of flying, 22 % from clear discomfort when flying [18]. Based on the DSM-V ("Diagnostic and Statistical Manual of Mental Disorders"), fear of flying is defined in the ICD-10-GM ("International Statistical Classification of Diseases and Related Health Problems - German Modification") under F40.2 as a specific isolated phobia. The triggering situation of the fear is strongly limited, in this case by flying [7].

Cognitive behavioural therapy has proven to be an integral part of established flight anxiety therapies, showing a significant improvement in flight anxiety in up to 77% of participants over one year [26]. Confrontation therapy is also part of behavioural therapy. It is considered the most effective treatment method for anxiety disorders [1]. There are also promising approaches to create the confrontation situation through "virtual reality" (VR) [5], which achieves comparable results to classical confrontation therapy [23].

Another form of therapy used for fear of flying is "eye movement desensitisation and reprocessing" (EMDR). EMDR is a recognised psychotherapeutic method for the treatment of post-traumatic stress disorders. The aim is to "desensitise" stressful experiences by means of bilateral brain stimulation [16]. The effects of classical therapy vs. cognitive behavioural therapy with EMDR or VR

comparable [24]. The limitation of traditional therapy is the accessibility of the method, with long waiting times of 19.9 weeks on average for psychotherapists [3]. VR-involving therapies are comparatively expensive, as the content must first be produced [4]. EMDR approaches require professionally qualified practitioners [24]. The diagnosis as a specific isolated phobia carries the risk of stigmatisation for the person affected by the diagnosis of a mental illness [14]. To counteract this, a new approach to the treatment of fear of flying could be found in coaching, as a collective term for psychotherapy-related intervention. Coaching itself is a combination of general psychological, cognitive-behavioural, psychodynamic and systemic techniques and is described as "psychotherapy for healthy people" [17]. Coaching is a client-centred process that aims to achieve the goals defined by the client [21]. In the field of coaching is wingwave[®] (Besser-Siegmund-Institut GmbH, Hamburg, Germany) (ww-)Coaching (wwC) is a reproducible method due to its standardisation. The basis of wwC is a combination of EMDR, neuro-linguistic programming and a myostatic test [21].

By means of wwC, individual stress triggers of all emotional qualities (systemic, physical and emotional) are supposedly identified and neutralised [27]. The procedure of a wwC is standardised in 12 phases and takes about three sessions. First, the individual stress trigger is identified with the help of the

The client is confronted with situations typical of the flight process. These are tested according to a fixed statement tree from packing the suitcase to leaving the destination airport. Once a stress trigger has been identified in a flight phase, it is immediately integrated by means of REM phases ("rapid eye movement") induced in wakefulness, similar to the procedure in the EMDR method, by a waving hand movement of the coach in front of the eyes of the person concerned. In this way, both somatic reactions and "catastrophic images" (systemic stress) associated with the fear of flying are addressed. Subsequently, "cover memories" are identified, which are hidden behind the fear - and according to the wwC theory should represent the actual causes of a fear of flying: They are often not consciously remembered by the client or have their origin in the assumption of emotions of another person and are therefore only rarely brought into connection with fear of flying. These cover memories are also addressed with the help of the EMDR intervention [2]. The myostatic test is then used to check the coaching result [22]. Overall, wwC for fear of flying seems worthwhile to be looked at more closely due to the standardisation of the procedure and the brevity of the intervention. The entire schematic procedure of a wwC is shown in [Fig. 1](#).

Question/objective

The aim of this qualitative study was to understand the background to fear of flying from the experience of ww coaches.

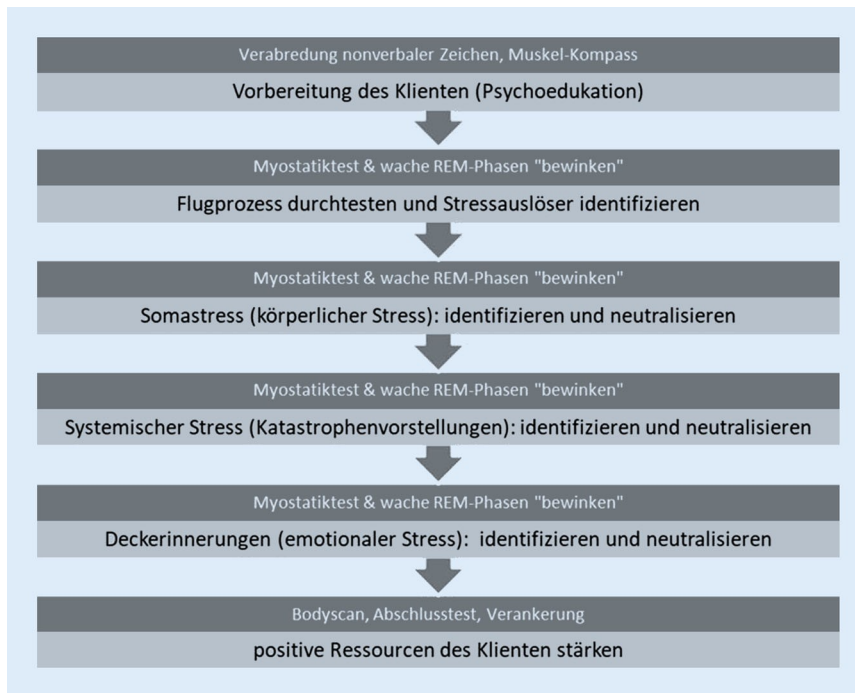


Fig. 1 8 Schematic representation of a wingwave® coaching session (wwC; own representation). REM "rapid eye movement"

to generate new hypotheses on how to deal with fear of flying.

Method

In order to prepare this study, a qualitative study design in the form of guideline-based expert interviews with ww coaches was carried out.

The questions for the guide were developed through discussions between the authors (KN and JS) based on the textbook for ww

[2] and piloted by a test interview with an experienced ww-coach, in particular to check the comprehensibility and clarity of the questions. The guideline did not need to be revised afterwards and contained the following questions:

- 4 What experience have you had with ww in connection with fear of flying made?
- 4 What kind of people seek help from you through ww in treating fear of flying?
- 4 In your experience, what are the most common reasons for fear of flying?

- 4 What are the weaknesses or strengths of the ww method for fear of flying?
- 4 To what extent is your approach influenced by the symptoms (how the fear of flying manifests itself)?
- 4 In which cases do you leave the 12-phase approach when using ww with a client with fear of flying?
- 4 What termination criteria have you defined for a session?
- 4 In which cases do you use other coaching techniques?
- 4 What other aspects are important to you that we have not yet talked about?

The semi-structured guide did not contain a predefined order of questions, and the interview was not limited to the questions in the guide.

The expert interviews were all conducted by telephone between February and April 2017. They were conducted by one of the authors (KN, a medical student at the time), recorded using a dictation machine and then transcribed. For this purpose, the transcription rules of the Institute of General Medicine Lübeck were taken

considered. During the transcription the pseudonymisation took place.

Sample

The contact details of the ww coaches were provided by the Besser-Siegmund-Institut (Besser-Siegmund Institut GmbH, Hamburg, Germany). The coaches were contacted by e-mail or telephone, the consent forms were obtained and the appointments for the interview were made by post or by e-mail to . The coaches were also contacted by telephone.

Analysis

The content analysis of the interviews was based on the qualitative content analysis according to Philipp Mayring [13]. For the creation of categories, generic categories were deductively formed from the questions in the interview guide. In the next step, the interviews were analysed with regard to their

into account.

Original work

statements and the corresponding statements found were sorted into the coding framework. If no corresponding category was available, a new one was created inductively. This evaluation was carried out in parallel by 2 persons (KN and L-MW, one doctor). After two coding guidelines had been created independently of each other in the way described, a personal meeting took place between the two authors and a third researcher (JS, doctor). The codes were compared, discussed if necessary and a consensus version was worked out.

In the following, the results of the following central guiding question for the research question are presented:

In your experience, what are the most common reasons for fear of flying?

Terms

The presentation of the results was based on the following understanding of the term: *Reason* is a circumstance by which

someone feels moved to do something to do something specific, or who has an er-

Summary - Abstract

Prev Health F <https://doi.org/10.1007/s11553-020-00796-8>
© The author(s) 2020

K. Naumenko - F. Niebuhr - J. Steinhäuser

Fear of flying from the experience of wingwave® coaches

Summary

Background. Fear of flying is a common those affected. Established

phobia, often isolated in the past of forms of therapy, such as cognitive behavioural therapy, are often not

directly related to the fear of flying. desensitisation and reprocessing" (EMDR). wingwave® coaching uses of flying. rarely addressed.

discussion. The established therapies EMDR intervention for clients with fear These causes behind fear of flying are

Method. In the future, it should be examined whether the treatment of fear of flying from the experience of wingwave® coaches leads to longer lasting successes.

Conducted guideline-based interviews and by means of qualitative content analysis evaluated.

Keywords

Fear of flying - Flying phobia - Eye Sensitisation and reprocessing - Myostatic and Coaching

movement de- **Results.** Identified overcategories test were reasons, emotions as triggers Causes of a fear of flying. The causes were

Fear of flying from the experience of wingwave® coaches

Abstract

Background. Fear of flying is a common were phobia. In addition to cognitivenot behavioural therapy, established forms direct therapy also include approaches from eyerelationship to the fear of flying. movement desensitization and reprocessingDiscussion . The established therapies for (EMDR) therapy. Also wingwave® coachingfear of flying very seldom take these causes uses the EMDR intervention.

located in the past and were often isolated spontaneously remembered by the ofaffected persons because there was no

Methods. With the aim of exploring back-examined whether treating the background grounds to fear of flying from the experiencecauses for fear of flying leads to longer lasting of wingwave® coaches, 23 guide-basedsuccess

interviews were carried out and evaluated using qualitative content analysis.

Keywords

wereFear of flying - Flight anxiety - Eye causesdesensitization and reprocessing - Myostatic of fear of flying. The causes for the feartest - Coaching

Results. General categories identified movement reasons, emotions as triggers and Myostatic of fear of flying. The causes for the feartest

- or another fact [10].
- *The trigger* is a stimulus that *triggers* certain instinctive behaviours. triggers [9]. A triggering stimulus is also called a trigger [11].
- *Cause* is something (circumstance, process, event) that causes an action or a state. The Cause is the real reason [12].

Results

Of the 25 coaches contacted, 23 took part in the study. Two coaches were excluded because they had not coached their own clients with the topic of fear of flying. The participants were on average 52 years old and mostly female. Further details on the socio-demographic data of the stu The participants are listed in [Tab. 1](#).

The interview duration ranged from 9 to 35 min, with an average of 20 min.

Reasons for fear of flying

When asked about the reasons for fear of flying, the telephone interviews showed that reasons and possible causes for fear of flying were considered separately by the ww coaches: "[...] I see another difference between reason and cause [...]". (TN21). Accordingly, in the consensus version, the results of the leading question were divided into the three upper categories "Reasons for fear of flying", "Emotions as triggers for fear of flying" and "Causes for fear of flying". A further subdivision into main and subcategories was made and in addition, corresponding anchor citations were assigned to the individual subcategories.

The results of the upper category "Reasons for fear of flying" with corresponding main and subcategories [Tab. 2](#).

Negative previous experience

The main reason given for the fear of flying was the negative experience the person had had on previous flights: "You come with a fear of flying.

not to the world, but that then also requires some bad experience" (TN22).

Triggers in the flying/flight process

The ww coaches reported that each individual phase of the flight process can be a trigger for fear of flying. The flight process already begins with the preparation for the journey and the journey to the airport: "Leaving the front door is a big stress trigger for many clients [...]". (TN16). Furthermore, the phases of the flight process continued in the procedures at the airport. Trigger

The most common trigger for fear of flying could be the baggage claim or the security check: "The security check is when the cheating starts" (TN14). Triggers for fear of flying were also mentioned during the flight itself or on the plane. Starting with the closing of the doors, the security briefing, buckling up in the cramped aircraft or hearing announcements: "Well, one time, the announcement both at check-in and in the aircraft. The topic was announcements. Well, announcements through loudspeakers. Yes, that was an insane stressor for one of them" (TN23). The

Tab. 1 Sociodemographic data of the study participants ($n = 23$)

Sociodemographic variables	n (%)
<i>Gender</i>	
Female	17 (74)
Male	6 (26)
Age, MW (min/max)	52 (38/65) Years
ww-Coach since, MW (Min/Max)	10 (2/30) years
<i>Nationality</i>	
Germany	21 (91)
Switzerland	2 (9)

MW Mean, Min Minimum, Max Maximum, ww wingwave®

The coaches named taxiing and take-off of the aircraft, the noise of the turbines or the vibrations during turbulence as further multiple triggers for fear of flying. However, interpersonal triggers were also reported, according to which a negative experience with someone else could be the reason for one's own discomfort and thus for the fear of flying: "Bad previous experiences with flights, i.e. bad previous experiences in the sense of turbulence, stress for oneself, for the other passengers. Even perhaps the staff, who sometimes walk around with a funny face, i.e. the stewards and stewardesses" (TN09).

Reports of plane crashes, emergency landings, plane hijackings or terrorist attacks can be found in the media in a variety of ways. Security measures against terrorism have also been increased at airports. Excessive preoccupation with these topics was mentioned in the interviews as another reason for fear of flying: "Not insignificant are also the classic catastrophe reports that you have in the media, television, newspaper reports. People have horror images in their heads" (TN09).

Learning from the model

It was reported several times that learning on the model was taking place on the subject of fear of flying. Children of people with fear of flying

Tab. 2 Results of the upper category "Reasons for fear of flying"

	Main category	Subcategory	
Reason for fear of flying	Negative previous	No further subdivision	
	Trigger when flying/ flight process	Approach airport	Check-in hall (baggage check, security check)
			Go to gate/flight is called
			Queue / walk through gangway
			Place search
			Doors are closed
			Safety introduction/announcements
			Buckle up
			Aircraft rolls/stops
			Fast take-off / lift-off
			Cruising altitude reached/blade mark
			Turbulence / vibrations
			Noise of the turbines
			Going to the toilet/walking through a narrow plane
			Experiences with passengers/crew
Occupation with the Topic	Media	Terrorism	
		Disasters	
		Parents	
Learning from the model	Media	Passed on topics	
		Mirror neurons	

children would learn to be afraid of flying even without their own bad flying experiences, in which they experienced the discomfort of a parent when flying: "Well, unless the parents had a dramatic fear of flying and have always, who knows how, sounded the alarm or distorted their faces. Then of course a child learns, even without its own traumatic experience, that flying is somehow not so funny" (TN22). This learning process can also occur without the direct experience of the flight situation, e.g. through media reports, or as a topic that is passed on. For example, fear of flying could have been passed on to the person affected as an experience from ancestors: "Then the topic is often also genetic stress. So there are also traumas from grandparents that can be tested in oneself up to the third generation [...]". (TN04). In the end, it is often enough to have been in a situation where another person suffers from fear of flying. Observation and one's own experience of this situation could then be used as a reason for one's

This is why mirror neurotic stress is often present in people who have a fear of flying. That you have already flown with someone who had a panic" (TN04).

Emotions as a trigger for fear of flying

Many of the interviewees reported that a fear of flying was triggered by emotions: "The fear of flying is often hidden. In other words, the subject is basically not fear of flying, but an emotion. It took place somewhere in connection with an experience and was somehow linked to the topic of flying" (TN10). The results of the upper category "Emotions as triggers for fear of flying" with corresponding main and subcategories are shown in **Table 3**.

Loss of control

Many people feel helpless on the plane. they give their lives to the foreign

Tab. 3 Results of the upper category "Emotions as triggers for fear of flying"

	Main category	Subcategory
Emotions as a trigger for fear of flying	Loss of control	"Passenger Syndrome"
		Helplessness
	Fear	Fear of heights/traps
		Claustrophobia
		Fear of fear
		Fear of terror
		Fear of death
		Fear of leaving home/leaving family behind
Anger	No further subdivision	

Tab. 4 Results of the upper category "Causes of fear of flying"

	Main category	Subcategory
Causes of fear of flying	Time of the cause	Past
		Childhood/Youth
		Around birth
		Age range
		Independent of age
	Causative properties	Thematically independent of fear of flying
		Very different
		Physical memories
		Does not have to be experienced
		One cause or several
	Accidents	Near-death experiences
		Fear of drowning
		Falls (tree, swing, horse, merry-go-round, etc.)
	Emotionally stressful experiences	Not found while playing hide and seek
		Sexual harassment/sexual experience
		Bad conscience/guilt/cheating
		Physical experience
		Being abandoned/separation of parents
		Been stolen from
		Parents' authority (tidying up the room)

The pilots have to trust that they will be brought safely to their destination. This helplessness was mentioned several times as an emotional trigger for fear of flying, together with the feeling of loss of control: "The so-called passenger syndrome. So people experience this loss of control particularly clearly in the context of an aeroplane, because it is simply at its maximum, isn't it?" (TN01).

Fear

In this context, the ww coaches emphasised that there is often a completely different fear behind the

fear of flying. This other fear occurs in combination with the fear of flying or is interpreted by the clients as a fear of flying during the flight: "[...] but it is more like fear of control, claustrophobia, fear of heights, fear of fear, partly fear of terror [...]". (TN06).

Anger

Ultimately, a fear of flying could also be based on another emotion. It was mentioned that anger is an emotion that triggers a negative feeling. If this anger arose on the plane,

it is misleadingly perceived as fear of flying: "[...] that it was mostly not really about fear, but for example I can still remember: once it was actually anger, which was then perceived as fear, because you can't have 'flying rage'" (TN12).

Causes of fear of flying

The main categories for the causes of fear of flying are "Time of cause", "Causal characteristics", "Accidents" and "Emotionally stressful experiences". The results of the main category "Causes of fear of flying" with the corresponding main and subcategories are shown in **Table 4**.

The aforementioned causes were the fear of flying was often not consciously remembered or accessible by the clients, but was identified by the myostatic test of the ww method and reported in the interviews by the coaches.

Time of the cause

The majority of ww coaches reported that the triggering cause of a fear of flying was often to be found in the client's past: "And, the most common cause is definitely the past, that something happened to the client in his past" (TN02). In this context, the aspect of time beginning at birth, but above all in childhood and adolescence, was given as a supplementary aspect. "Quite often it was things that happened in childhood or adolescence" (TN18).

Causative properties

The causes of a fear of flying were given as very different, since according to the interview participants, in principle all experiences in life can trigger a fear of flying. These experiences were therefore often thematically completely independent of the later fear of flying: "Certain experiences. [...] So any experiences that are not necessarily directly related to a fear of flying" (TN05). It was immaterial whether the client had experienced the event himself or was only present: "It is usually the case that it does not even have to be the person's experience.

but something happened in the social environment, like an accident, or fear for the mother or whatever, where you as a person then stood there helplessly, and it then showed up as a problem later" (TN17). Furthermore, it was unimportant for the later fear of flying whether there was only one cause or a combination of several causes: "So in this respect - there are people who have many things attached to their fear of flying. And for others it's just one thing or two or at most three. And, in this respect, it is absolutely different" (TN18).

Accidents

Accidents were also frequently mentioned as the cause of a fear of flying: "Apart from that, a lot of experiences leave traces in the memory of accidents. People who somehow fell out of a tree. Or, or fell off a horse" (TN18). The coaches reported both more banal falls, which every child had experienced, and more dangerous situations such as near drowning or helicopter crashes:

"Someone who had an experience where he was pressed under water and almost, well, really had a near-death experience. And then there was this approaching snow above the water, and the thought 'I could drown' [...]" (TN08).

Emotionally stressful experiences

In addition to accidents, other experiences, especially emotionally stressful ones, were also mentioned in the interviews as a cause of fear of flying: "Yes, so these are always - personal experiences with, in connection with strong emotions. [...] And they are always very strong emotions with experiences that in some way connected me with my emotions to others" (TN10). These experiences are very diverse and associated with correspondingly diverse emotions. Starting with feelings of shame and guilt, situations such as not being found during a game of hide-and-seek or being robbed, physical experiences were also mentioned as a triggering cause for fear of flying: "I say you sit down and are supposed to fasten your seat belt.

We had

There was already a case where a woman had neurodermatitis as a child and she was actually in hospital more and more often and had to be strapped in so that she didn't hurt herself" (TN14). The ww coaches also mentioned the topic of sexuality as a cause of fear of flying. Sexual harassment is undoubtedly an emotionally stressful experience, but the first sexual contact is also a special experience that came up in the interviews as a triggering cause:

"And the fear issue was the first sexual contact with her partner at the time, who was much older and had a very large male member. And she got the association with an aeroplane and that's where it manifested itself" (TN16).

Discussion

With the chosen method, new hypotheses on dealing with fear of flying could be generated from the experience of ww coaches. In the interviews, various reasons and triggers for fear of flying were mentioned. In addition, the ww coaches describe several triggers that can trigger a fear of flying during the flight process. In accordance with the causality principle of "cause-and-effect" ([8] based on Greek philosophy), the mentioned triggers are contrasted by the coaches with a reason for the fear of flying, e.g. negative previous experiences or an excessive preoccupation with the topic.

Furthermore, strong emotions are reported as triggers of a fear of flying. Loss of control, fear and anger are mentioned here. They all trigger a negative feeling in the client and, if they occur in connection with flying, lead to fear of flying, as the process of flying is thus inevitably perceived as negative.

An important result of the interviews is to consider the reasons and triggers of fear of flying separately from the actual causes of a fear of flying. The ww coaches come to the conclusion that an emotionally stressful experience in the past is often the cause of the fear of flying.

The majority of these experiences are reported during the childhood and adolescence of the person concerned. In the interviews it becomes clear that these striking experiences in the past are also often associated with strong emotions. Both excessive fear and helplessness are often described in the context of the experience. Even if the situations experienced originally occurred in a completely different context than flying, the corresponding emotions seem to reappear later in the context of a fear of flying.

(○ Fig. 2). Recent findings on the distribution of the

The results of the study show that the anatomical structure of the amygdala is deactivated by EMDR. This anatomical structure plays a central role in the learning of fears [6].

In the interview reports, a triad of reason, emotion and cause in the occurrence of fear of flying became clear. The present work supplements the idea of "causes of a fear of flying" for treatment, as these have not been a subject of treatment methods so far.

Confrontation therapy works on the principle of habituation. By repeatedly putting the client into the frightening situation, the stimulus, in this case fear of flying, is to be reduced in the long term by the onset of habituation.

Within the established methods of treatment for fear of flying, a combination of individual methods, such as cognitive behavioural therapy with "virtual reality", recommended [19]. The combination of these methods with EMDR, which is part of ww coaching, also showed a clear efficacy in the treatment of fear of flying [24]. Since EMDR has so far been used in behavioural therapy for the treatment of trauma, the search for the cause is largely ignored here as well, since the trauma is usually known. The primary goal is to neutralise the stress [15].

It is important to emphasise that the present study does not deal with the

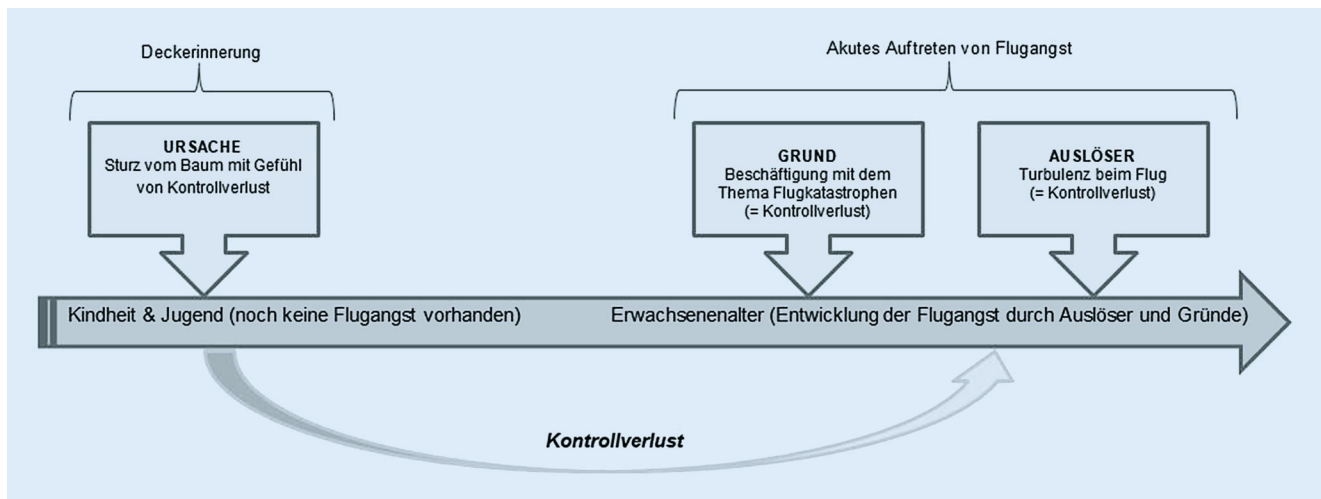


Fig. 2 8 Developmental construct for the temporal occurrence and interaction of reason, trigger and cause of a fear of flying (own representation)

question about the effectiveness of ww in the treatment of fear of flying. It was also not the aim to evaluate ww in comparison to other treatment methods.

Common questionnaires are used for the scientific assessment of fear of flying, such as the Fear of Flying Questionnaire (FFB) and the Flying Phobia Screening Questionnaire (FSB) from the Fear of Flying and Flying Phobia Inventory (FAPI) of the test centre of the Hogrefe publishing house [20]. While the FFB focuses more on the specific triggers of fear of flying during the flight process, the FSB asks about possible backgrounds of a fear of flying. Here, too, the focus is on anamnestic facts, such as emergency landings already experienced,

Hijackings or any other reason-emotional stresses that can explain a fear of flying. Causes behind the fear (especially of an emotional nature) also remain largely unnoticed here.

For further research in this area, a long-term comparison of the various treatment concepts for fear of flying is therefore recommended. However, since the corresponding causes, as reported in our interviews, are not cognitively remembered by the affected persons themselves, because they are very individual and often do not appear obvious in the context of fear of flying, they largely elude the possible research methods. Instead, it should be investigated whether

After successful treatment of the fear of flying with various methods, new fears may arise as a substitute for the fear of flying. Furthermore, it seems advisable to use the ww method to conduct systematic investigations to verify the hypotheses derived from the interviews that there is a cause in the past behind every fear of flying, furthermore how the causes are located and whether further frequencies and commonalities within the causes of a fear of flying can be proven than those found here so far.

Strengths and weaknesses

Concluding from the triad

cause it would be nö-

It is therefore important to treat the underlying causes of a fear of flying as well. If, as in the established therapies for fear of flying, the causes are ignored, the fear of flying would have been treated successfully, but the underlying cause with its problems could show up in the future in a new fear or another limiting problem for the person affected. This hypothesis is known as symptom shift or symptom substitution. A limitation of the present study is certainly the lack of transferability of this hypothesis to EMDR. Since this is also a theoretical over-

The theory can hardly be verified until today. Empirical evidence is not yet available [25].

This study was dedicated to the possible backgrounds of fear of flying, as observed in the context of the wwC, from the perspective of the ww coaches. Coaches with experience in the field of fear of flying were selected for the survey, so that on the one hand the survey could be more specific than e.g. with standardised questionnaires, but on the other hand only the personal experience of the coaches with partly only a few fear of flying clients could be reflected. Due to the qualitative design of the study, no conclusions can be drawn about the overall background of people affected by flight fear.

Conclusion for the practice

— This study shows a variety of reasons for fear of flying from the experience of wingwave® (ww) coaches.

— A key result of the in is to identify reasons and triggers for the

The fear of flying must be considered separately from the actual causes of a fear of flying. In order to overcome the fear of flying in the long term, it seems to be important to also consider the actual causes behind the fear.

— It becomes clear that the challenge is to investigate these causes, as

they are very indi

vidual and abstract and are often not cognitively accessible to those affected. This should be considered in the context of further studies.

Correspondence address



Kristina Naumenko
Institute of General Medicine,
University of Lübeck,
Schleswig-Holstein
Ratzeburger Allee 160,
23562 Lübeck, Germany
kristina.naumenko@student.uni-
luebeck.de

Acknowledgements. The study was supported by: Gesellschaft für Neurolinguistisches Coaching e. V., Hamburg, Germany.

Funding. Open Access funding provided by Projekt DEAL.

Compliance with ethical guidelines

Conflict of interest. F. Niebuhr is a general practitioner in private practice and an active ww coach outside the practice. K. Naumenko and J. Steinhäuser declare that there is no conflict of interest.

The study was approved by the ethics committee of the University of Lübeck (file number 15-329 of 03 February 2017). Informed consent was obtained from all interviewed ww coaches. This article does not contain any studies on humans or animals.

Open Access. This article is published under the Creative Commons Attribution 4.0 International licence, which permits use, copying, adaptation, distribution and reproduction in any medium and format, provided you properly attribute the original author(s) and source, include a link to the Creative Commons licence, and indicate whether any modifications have been made.

The images and other third-party material contained in this article are also subject to the aforementioned Creative Commons licence, unless otherwise stated in the legend. If the material in question is not covered by the aforementioned Creative Commons licence and the action in question is not permitted under statutory provisions, the consent of the respective rights holder must be obtained for the further uses of the material listed above.

For further details on the licence, please refer to the licence information at <http://creativecommons.org/licenses/by/4.0/deed.de>.

Literature

1. Bentz D, Michael T, Margraf J (2009) Confrontation and exposure. *Psychiatr Psychother Up2date* 3:409-425
2. Besser-Siegmund C, Siegmund H (2015) wing-wave coaching: Like the flap of a butterfly's wings, 3rd ed. Junfermann, Paderborn
3. Bundespsychotherapeutenkammer (2019) One year after the reform of the psychotherapy guideline waiting times 2018. <http://www.bptk.de/publications/bptk-study/>. Accessed: 29 Jan. 2019
4. Campos D, Bretón-López J, Botella Cetal (2016) An Internet-based treatment for flying phobia (NO- FEAR Airlines): study protocol for a randomized controlled trial. *BMC Psychiatry*. <https://doi.org/10.1186/s12888-016-0996-1>
5. Costa RT et al (2009) Virtual reality exposure in the treatment of fear of flying. *Aviat Space Environ Med*. <https://doi.org/10.3357/ASEM.2277.2008>
6. De Voogd LD, Kanen JW, Neville DA et al (2018) Eye-movement intervention enhances extinction via amygdala deactivation. *J Neurosci*. <https://doi.org/10.1523/JNEUROSCI.0703-18.2018>
7. German Institute for Medical Documentation and Information (2019) ICD-10- GM Version 2019. <https://www.dimdi.de/static/en/classifications/icd/icd-10-gm/code-search/htmlgm2019/block-f40-f48.htm>. Accessed 29: Jan. 2019.
8. Dorsch Lexikon der Psychologie (2019) Causality. <https://m.portal.hogrefe.com/dorsch/causality/>. Accessed 9 Jan. 2019
9. Duden (2019) Trigger. <https://www.duden.de/rechtschreibung/Ausloeser>. Accessed 8 Jan. 2019
10. Duden (2019) Grund. <https://www.duden.de/rechtschreibung/Grund>. Accessed 8 Jan. 2019
11. Duden (2019) Trigger. <https://www.duden.de/rechtschreibung/Trigger>. Accessed 8 Jan. 2019
12. Duden (2019) Cause. <https://www.duden.de/spelling/cause>. Accessed: 8 Jan. 2019
13. Flick U, von Kardorff E, Steinke I (2005) *Qualitative Research: A Handbook*. Rowohlt, Reinbek bei Hamburg
14. Gaebel W (2004) Mentally ill: Stigma hampers treatment and integration. *Dtsch Arztebl* 101:A-3253-A-3255
15. Federal Joint Committee (2015) Abschlussbericht: Eye Movement Desensitization and Reprocessing (EMDR) als Methode im Rahmen von Einzelpsychotherapie bei Erwachsenen im Anwendungsbereich Posttraumatische Belastungsstörungen (PTBS). www.g-ba.de/downloads/40-268-2987/2014-10-16_PT-RL_EMDR_Umstrukturierung-Anlage1_ZD.pdf. Accessed 28 Jan. 2019.
16. Federal Joint Committee (2019) Post-trauma stress disorders: EMDR recognised as a method in psychotherapy. <https://www.g-ba.de/institution/press/press-releases/557/>. Accessed 8 Jan. 2019
17. Holm-Hadulla RM (2002) Coaching. *Psychotherapeut* 47:241-248. <https://doi.org/10.1007/s00278-002-0236-7>
18. Institut für Demoskopie Allensbach (2003) Allensbacher Berichte Nr. 16: Wieder mehr Flugreisen. https://www.ifd-allensbach.de/uploads/tx_reportsndocs/prd_0316.pdf. Accessed: 9 Jan. 2019
19. Krijn M, Emmelkamp P, Ólafsson R et al (2007) Fear of flying treatment methods: virtual reality exposure vs. cognitive behavioural therapy. *Aviat Space Environ Med* 78:121-128
20. Mühlberger A, Pauli P (2011) Flugangst- und Flugphobie-Inventar. Hogrefe, Göttingen
21. Niebuhr F, Wilfling D, Hahn K, Steinhäuser J (2018) Coaching from a general medicine perspective: a systematic literature review. *Prev Healthf* 13:91-96. <https://doi.org/10.1007/s11553-017-0636-8>
22. Rathschlag M, Memmert D (2014) Reducing anxiety and enhancing physical performance by using an advanced version of EMDR: a pilot study. *Brain Behav* 4:348-355. <https://doi.org/10.1002/brb3.221>
23. Rus-Calafell M, Gutiérrez-Maldonado J, Botella C, Baños RM (2013) Virtual reality exposure and imaginal exposure in the treatment of fear: a pilot study. *Behav Modif* 37:568-590. <https://doi.org/10.1177/0145445513482969>
24. Triscari MT, Faraci P, Catalisano D et al (2015) Effectiveness of cognitive behavioural therapy integrated with systematic desensitization, cognitive behavioural therapy combined with eye movement desensitization and reprocessing therapy, and cognitive behavioural therapy combined with virtual reality exposure therapy methods in the treatment of flight anxiety: a randomized trial. *Neuropsychiatr Dis Treat*. <https://doi.org/10.2147/NDT.S93401>
25. Tryon WW (2008) Whatever happened to symptom substitution? *Clin Psychol Rev* 28:963-968. <https://doi.org/10.1016/j.cpr.2008.02.003>
26. Van Gerwen LJ, Spinhoven P, Van Dyck R (2006) Behavioral and cognitive group treatment for fear of flying: a randomized controlled trial. *J Behav Ther Exp Psychiatry* 37:358-371. <https://doi.org/10.1016/j.jbtep.2006.05.002>
27. Wingwave (2019) What is wingwave? <https://wingwave.com/coaching/what-is-wingwave.html>. Accessed 8 Jan. 2019