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# Strategies of adults for dealing with feelings of guilt – findings from a large web-based survey

#### **BACKGROUND**

Feelings of guilt are common in adulthood. Depending on the situation, individuals need different strategies for dealing with these usually unpleasant experiences. The aim of this study was to provide comprehensive empirical information about such different guilt-related strategies used in adulthood.

#### PARTICIPANTS AND PROCEDURE

A cross-sectional web-based survey was conducted (05/2019-04/2020) collecting autobiographical information on guilt experiences. Stated strategies for dealing with feelings of guilt were classified into inductively defined categories, and the frequency of the categorized strategies was calculated (total, gender-, age-specific). Associations between applied strategies and gender and age were analyzed using Cramér's  $\phi$  and V as appropriate.

#### RESULTS

Analyzing statements of 579 participants (18-84 years), we differentiated 34 different categories of guilt-related strategies. The most frequently used strategies were "Self-

reflection; contemplation; analyzing/reviewing things one feels guilty about" and "Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt". Female and male participants showed a significantly different use only in the strategy of utilizing "Professional support/therapy/counseling" (10.57% vs. 3.67%; Cramér's  $\varphi$  = .13, p = .001). Additionally, only a few differences were found with regard to age.

#### CONCLUSIONS

Adults use a broad variety of different strategies for dealing with feelings of guilt. Strategies regulating emotional responses to the problem causing feelings of guilt seem to be at least as important as strategies targeting the problem itself. Many strategies do not serve pro-social functions. Feelings of guilt are an issue relevant for mental health care since several of the adults with feelings of guilt utilize professional help, and an even higher number may need such help.

#### KEY WORDS

guilt; coping; adulthood; population-based

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#### BACKGROUND

Guilt is a frequently experienced emotion in adulthood (Luck & Luck-Sikorski, 2021a, b). At the same time, guilt is an unpleasant emotion (e.g., Cryder et al., 2012), which may be not surprising as it – according to a comprehensive definition of Tilghman-Osborne et al. (2010) – "involves moral transgressions (real or imagined) in which people believe that their action (or inaction) contributed to negative outcomes" and is accompanied by "a sense of responsibility and painful feelings of remorse".

The unpleasant character of guilt is widely considered to have important pro-social functions. Individuals are motivated by feelings of guilt for reparative actions (changing unfavorable behavior, correcting negative outcomes one has caused, etc.) and may avoid comparable transgressions in the future. Moreover, clearly recognizable signs of guilt and apologies may appease victims and bystanders (e.g., Tangney et al., 2007; Tilghman-Osborne et al., 2010; Vaish, 2018; Williams & Bybee, 1994). In a perfect world, individuals are able and capable of undertaking such actions successfully, and feelings of guilt will diminish or completely disappear. In real life, however, individuals may not always be able or capable (or willing) of undertaking such actions (for example, in scenarios where negative outcomes cannot be made undone or corrected or where apologies are not possible or not accepted) or where individuals may undertake such actions successfully, but feelings of guilt may still be present.

Thus, a broader variety of strategies for dealing with feelings of guilt is needed, including strategies that are more able to regulate emotional responses to the problem causing feelings of guilt than to target the problem itself. Following the famous *coping* concept, many such strategies can be subsumed under the term *emotion-focused coping* (as opposed to *problem-focused coping*) and comprise, for example, efforts of seeking social support for emotional reasons, seeking comfort from religion, accepting, positively reinterpreting and denying things that happened (Lazarus & Folkman, 1984; Stanisławski, 2019).

Much information on potential strategies for dealing with feelings of guilt has been gathered by experimental studies (e.g., Cryder et al., 2012; de Hooge et al., 2011; de Hooge, 2012). Such studies – providing essential in-depth insights such as "[...] that it is not the relationship with the victim that is important in the regulation of guilt feelings, but rather the reparative actions that have been undertaken" (de Hooge, 2012, p. 1189) – usually focus on the examination of a limited number/specific strategies and especially on pro-social reparative behaviors motivated by guilt experiences. An important complement for experimental studies are studies analyzing autobiographical narratives of guilt experiences (e.g., Baumeister et al.,

1995; Silfver, 2007), as such studies allow for openly exploring the above stated required wider variety of strategies for dealing with feelings of guilt.

The idea of the present study was to build upon the idea of collecting autobiographical information to learn more about the different strategies that are used by individuals for dealing with feelings of guilt. Conducting a cross-sectional web-based survey in Germany, we asked adults to share information about their experienced feelings of guilt (see Luck & Luck-Sikorski, 2022). This open approach allowed us to provide a view of the broad variety of different strategies that adults from their own perspective – actually use to counter feelings of guilt in real life (first study aim). Moreover, as we were able to gather information on such different strategies from a considerably significant number of adults (n = 579), we additionally calculated the frequency of the use of the different strategies, which allowed us to make assumptions about their potential relative importance in adulthood (second study aim). Finally, as adults of different ages (18-84 years in the analysis sample) and genders (n = 331/57.17% women; n = 245/42.31% men; and n = 3/0.52% adults without personal identification with a particular gender in the analysis sample) participated in the survey, we were also able to provide information about potential ageand gender-related differences in strategies for dealing with feelings of guilt in adulthood (third study aim).

Strategies for dealing with guilt

#### PARTICIPANTS AND PROCEDURE

#### **SURVEY**

We conducted a cross-sectional web-based survey from May 2019 to April 2020 in Germany. For an overview of the conducted survey, see also Luck and Luck-Sikorski (2022). Consumerfieldwork GmbH, an independent fieldwork agency providing an actively managed proprietary online panel of registered users for research purposes (http://www.consumerfieldwork.com/index.htm), supported the recruitment of participants. Eligible participants (inclusion criteria: age 18 years or older; having experienced feelings of guilt at least once in the lifetime) completed the survey on a secure web-based survey platform (SoSci Survey; https://www.soscisurvey.de/en/index).

Information on the study aims, inclusion criteria, designated use of the collected data, data protection, time required to complete the survey, and contact information for queries was provided at the beginning of the survey before participants were asked to answer any questions. Additionally, at the beginning, it was clearly stated that completion of the survey was considered consent to participate in the survey and to provide the data for the stated research purposes.

The ethics committee of the University Hospital of Jena, Germany reviewed and approved the study (ap-

proval number: 2019-1334-Bef). The study also complies with the ethical standards of the 1964 Declaration of Helsinki and its later amendments.

#### **MEASURES**

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The survey included a standardized questionnaire on sociodemographic characteristics, feelings of guilt, depressive features, self-esteem, satisfaction with life, optimism, and pessimism. For this specific report on strategies for dealing with guilt, we analyzed collected data on participants' age, gender, educational level, depressive features and answers regarding the following guilt-related questions:

- (1) "Do you currently have feelings of guilt?" (yes/no)
- (2) "Have you ever had feelings of guilt in the past?" (ves/no)
- (3) "How are you dealing/how did you deal with your feelings of guilt? (i.e., What are/were your strategies for dealing with feelings of guilt?)" (open-ended question)

Depressive features were identified using the German version of the 9-item depression scale of the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001; Löwe et al., 2004). The PHQ-9 total score ranges from 0 to 27 points. Higher scores on the PHQ-9 depression scale indicate a higher presence of depressive symptoms.

#### ANALYSIS

In the first step, we sifted the data and excluded data sets of all participants not fulfilling the inclusion criteria of being at least 18 years old and having experienced feelings of guilt at least once in the lifetime (answering "no" to both of the questions: "Do you currently have feelings of guilt?"; "Have you ever had feelings of guilt in the past?") as well as of all participants with missing information on feelings of guilt/strategies for dealing with feelings of guilt from further analyses.

In the second step, participants' statements on strategies for dealing with feelings of guilt were classified into categories. After a comprehensive review of the literature, we carefully decided to inductively classify the data, as there is no specific widely agreed taxonomy system for such guilt-related strategies. Additionally, we did not want to use an imperfectly fitting taxonomy system that may have a priori limited the view of the potential wide variety of different strategies, for example, by strongly summarizing potentially different strategies into predefined broad categories.

An important concept that may come to one's mind when thinking about a possible taxonomy system for strategies for dealing with an emotion such as guilt, of course, may be the already stated *coping* 

concept. Over the past four decades, however, hundreds of different ways of coping and dozens of different coping taxonomy systems have been described (e.g., Carver & Connor-Smith, 2010; Skinner et al., 2003; Stanisławski, 2019), and there is also no widely agreed upon system. We therefore adhered to our decision to inductively classify the data. Nevertheless, by interpreting our results, we will strongly refer to well-known ways of coping.

When inductively classifying the different strategies for dealing with feelings of guilt, the two authors of this article first independently sifted the participants' statements, each defining a set of categories for classification. Second, the two sets of categories were compared, and a joint consented set of categories was defined. Third, both researchers independently assigned the participants' statements on strategies for dealing with feelings of guilt to the joint set of categories. Fourth, the results of the categorization were compared and discussed until an agreement on all assignments was reached.

In the next step, the frequency of use of the strategies of the different defined categories was calculated (for the full analysis sample and gender- and agespecific).

To analyze potential associations between gender (female vs. male participants) and age (younger adulthood/18-34 years vs. middle adulthood/35-59 years vs. older adulthood/60+ years) and the use of strategies for dealing with feelings of guilt of the different defined categories, Cramér's  $\phi$  and Cramér's V with corresponding 95% confidence intervals (95% CI; estimated by using the bootstrap method with 1,000 samples) and p values (estimated by Monte-Carlo simulation with 10,000 samples) were calculated as appropriate.

To analyze potential differences in the overall number of strategies used for dealing with feelings of guilt between the gender and age groups, the Kruskal-Wallis H test with the Dunn-Bonferroni post hoc test for multiple pairwise comparisons was applied.

All analyses employed an alpha level for statistical significance of .05 (two-tailed). All statistical analyses were performed using IBM SPSS Statistics for Windows, Version 27.0.

#### **RESULTS**

#### SAMPLE

Altogether, N=893 adults participated in the survey. Among these participants, n=302 (33.82%) either did not fulfil the inclusion criterion of having experienced feelings of guilt at least once in the lifetime (n=216/24.18%) or had missing information on feelings of guilt (missing information on reasons for feeling guilty or on strategies for dealing with the feelings

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or on both or missing information on feelings of guilt at all; n=86/9.63%). Another n=12 (1.34%) participants stated that they did not have any strategies at all for dealing with feelings of guilt, leaving a final analysis sample of N=579 (64.84%) adults for the purposes of this report: n=331 women (57.17%), n=245 men (42.31%) and n=3 adults (0.52%) without personal identification with a particular gender. The mean age of the sample was 45.45 years (SD=16.45 years; median = 45 years; range = 18-84 years). The mean total score on the PHQ-9 depression scale was 6.83 points (SD=4.91; range = 0-23; missing information for n=1 participant/0.17%).

### STRATEGIES FOR DEALING WITH FEELINGS OF GUILT – FULL SAMPLE

Altogether, we assigned 987 participants' statements on strategies for dealing with feelings of guilt to 34 defined categories (32 specific categories; one category (no. 33) referring to "Other, rarely stated strategies (each used by less than four participants)" and one category (no. 34) referring to "Unclear/vaguely formulated strategies for dealing with feelings of guilt"). Table 1 provides an overview of these 34 strategy categories as well as corresponding examples of quotes by study participants.

Strategies for dealing with guilt

**Table 1**Defined categories of strategies for dealing with feelings of guilt and corresponding example quotes of the study participants

#	Defined category	Example quotes
1	Self-reflection; contemplation; analyzing/ reviewing things one feels guilty about	"Reflecting on it for a very long time"
2	Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt	"I try to forget it and I don't think about this subject anymore"
3	Talking to someone about the feelings of guilt; asking someone for advice (other than the person(s) one is feeling guilty about)	"Talking to friends and family"
4	Talking to the person(s) one feels guilty about; confession of/broaching the believed moral transgressions/wrongdoings/associated feelings of guilt	"After one or more sleepless nights I told the truth"
5	(Trying) to apologize/to ask/hope for forgiveness	"On the following day, I apologized"
6	Learning from things happened for the future; (attempts of) acting differently	"I did better the next time"
7	Self-exculpation; reattributing/cognitively restructuring/rationalizing things one feels guilty about; trying to put things in another perspective (e.g. by drawing comparisons with oneself or others)	"I try to cover my feelings of guilt and to look for reasons to justify them"
8	Professional support/therapy/counseling	"I saw a psychiatrist. He helped me to come to terms with my feelings of guilt"
9	Distracting oneself	"Distraction by friends and work"
10	Wait and see/Time heals all wounds	"Letting time pass by"
11	(Trying) to eliminate the underlying causes of the experienced feelings of guilt/to solve the underlying problems	"I looked for alternatives to solve this problem, but I wasn't completely successful"
12	(Attempts of) reparation/making amends	"I tried to make it up"
13	Allowing/bearing/living with the feelings of guilt; carrying the feelings of guilt around	"I had to bear the feelings of guilt. After all, I was always guilty"

(Table 1 continues)

(Table 1 continued)

Table 1

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#	Defined category	Example quotes
14	Adhering to/accepting the believed moral transgressions/wrongdoings/associated feelings of guilt	"No idea. At some point I accepted them [the feelings of guilt]. It is a little better now"
15	Praying; going to confession; seeking comfort from religion/spirituality	"I went to confession and talked to the minister"
16	Doing sports	"Swimming"
17	Crying	"Most of the times, I started by having a good cry (by myself)"
18	Consuming alcohol	"Alcohol"
19	Looking on the bright side; focusing on positive aspects	"In every bad situation, I also look at the advantages"
20	Doing good in compensation (not related to the specific person(s)/event(s) one feels guilty about)	"[] Sometimes I also do good to counterbalance my karma. I assume that I do enough good to also be allowed to be bad sometimes"
21	Rage/anger	"Getting angry"
22	Trying to calm down/to be relaxed; use of relaxation techniques; meditation; serenity	"I try to calm myself"
23	(Attempts of) self-forgiveness	"I am trying to forgive myself"
24	Going into one's shell	"I went into my shell"
25	Depression	"Chronic depression"
26	Allowing/giving oneself a treat; enjoying beautiful things; looking after number one	"Allowing myself a treat"
27	Keeping a diary/writing about the feelings of guilt	"Keeping a diary"
28	Personal growth; life experience	"Development of a healthy strong me"
29	(Trying to) deal with it by oneself	"I don't have a specific strategy. I try to deal with it by myself []"
30	Grief	"Being sad"
31	Demeaning oneself; self-hate; self-punishment; self-harm	"I self-harmed many times"
32	Thoughts of suicide; suicide attempts	"Attempted suicide several times"
33	Other, rarely stated strategies <sup>a</sup>	"Going for a walk"; "Going to bed"; "I tried to keep distance to the person concerned"; "I regretted it"; "Fatalism"; "Taking a tranquilizer"; "I have a picture of both of then in my living room. Thus, they are with me"; "In South America, I learned to live in the here and now. I used this strategy here"; "Visiting animals"; "Doing something I am good at"; "Doing creative things"
34	Unclear/vaguely formulated strategies for dealing with feelings of guilt	Not applicable

Note. aGoing for a walk/on a hike/into nature; sleeping; keeping distance to the person(s) one feels guilty about, regretting the believed moral transgressions/wrongdoings; resignation, fatalism; taking medication; cherishing the person(s) one feels guilty about; living in the here and now; spending time with animals; doing something one is good at; doing creative things.

As a result of the categorization process, each participant, on average, used 1.70 strategies for dealing with feelings of guilt (SD = 0.96, Me = 1.00; range = 1-6).

As shown in Table 2, participants used strategies that were most frequently assigned to the categories "Self-reflection; contemplation; analyzing/reviewing things one feels guilty about" (strategies used by n = 114 or 19.69% of the 579 participants), "Repressing/ignoring/(actively) forgetting/not thinking about/ bottling up the feelings of guilt" (n = 108, 18.65%), "Talking to someone about the feelings of guilt; asking someone for advice (other than the person(s) one is feeling guilty about)" (n = 105, 18.13%), "Talking to the person(s) one feels guilty about; confession of/ broaching the believed moral transgressions/wrongdoings/associated feelings of guilt" (n = 98, 16.93%), "(Trying) to apologize/to ask/hope for forgiveness" (n = 69, 11.92%), and "Learning from things that happened for the future; (attempts of) acting differently" (n = 65, 11.23%). Thus, each of these six categories covered strategies that were used by more than 10% of the n = 579 participants of the full analysis sample.

### STRATEGIES FOR DEALING WITH FEELINGS OF GUILT – ASSOCIATION WITH GENDER

Male participants, on average, used 1.60 (SD=0.92), female participants used 1.78 (SD=0.98), and participants without personal identification with a particular gender used 2.33 (SD=1.15) different strategies for dealing with feelings of guilt. Only the difference in the number of strategies used between male and female participants was statistically significant (overall Kruskal-Wallis H test:  $\chi^2=7.40$ , df=2, p=.025; Dunn-Bonferroni post hoc test for multiple pairwise comparisons: male vs. female participants: p=.044; male participants vs. participants without a participants p=.888).

In interpreting these results, however, it has to be kept in mind that only three adults without personal identification with a particular gender participated in the study. As shown in Table 2, these three participants used strategies for dealing with feelings of guilt in seven of the 34 defined categories. Three of the seven categories were among the above stated six categories, each covering strategies used by more than 10% of the full analysis sample: "Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt", "Talking to the person(s) one feels guilty about, confession of/broaching the believed moral transgressions/wrong-doings/associated feelings of guilt", and "(Trying) to apologize/to ask/hope for forgiveness".

The above stated six categories, each covering strategies used by more than 10% of all participants, also covered the strategies used most frequently by

male and female participants (see Table 2). Female participants, in addition, frequently used strategies for dealing with feelings of guilt that were assigned to the category "Professional support/therapy/counseling" (covering statements on strategies of n=35 or 10.57% of the 331 female participants vs. n=9 or 3.67% of the 245 male participants). As shown in Table 2, the association between the use of strategies of this category and female gender was statistically significant (Cramér's  $\varphi=.13,95\%$  CI [.05; .20], p=.001). The use of strategies of all other 33 categories was statistically independent of being either a man or a woman (see Table 2; due to their small number, adults without binary gender identification were not included in group comparison statistics).

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### STRATEGIES FOR DEALING WITH FEELINGS OF GUILT – ASSOCIATION WITH AGE

To analyze potential differences in the use of strategies for dealing with feelings of guilt of the 34 defined different categories with regard to age, we divided the full analysis sample of the n=579 participants into three age groups: participants in younger adulthood (18-34 years; n=212/36.61%), in middle adulthood (35-59 years; n=219/37.82%) and in older adulthood (60+ years; n=148/25.56%).

Participants aged 18-34 years, on average, used 1.95 (SD=1.02), participants aged 35-59 years used 1.66 (SD=0.93), and participants aged 60+ years used 1.42 (SD=0.80) different strategies. All age-related differences in the number of strategies used were statistically significant (overall Kruskal-Wallis H test:  $\chi^2=35.85$ , df=2, p<.001; Dunn-Bonferroni post hoc test for multiple pairwise comparisons: participants aged 35-59 vs. 18-34 years: p=.001; participants aged 60+ vs. 18-34: p<.001; participants aged 60+ vs. 35-59 years: p=.023).

Strategies of two of the above stated six categories covering strategies used by more than 10% of all participants were also frequently used by participants of all three age groups: "Self-reflection; contemplation; analyzing/reviewing things one feels guilty about" (age 18-34/35-59/60+ years = 20.75/19.18/18.92%) and "Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt" (age group 18-34/35-59/60+ years = 20.28/18.72/16.22%) (see Table 2). Strategies of the category "Talking to someone about the feelings of guilt; asking someone for advice (other than the person(s) one is feeling guilty about)" were used by more participants of the youngest age group, 18-34 years, than by participants of age groups 35-59 and 60+ years (28.77% vs. 15.98% vs. 6.08%; Cramér's V = .23, p < .001). Significantly more participants of the youngest age group than of the two older age groups also used strategies of the categories "Talking to the person(s) one feels guilty about;

Table 2

Frequency of the use of strategies for dealing with feelings of guilt of different defined categories – gender- and age-specific and in the full analysis sample (N = 579)

Def	Defined category				Frequ	ency	of the u	se of s	Frequency of the use of strategies for dealing with feelings of guilt of different defined categories	or deal	ing wit	h feelin	gs of g	uilt of c	liffere	ıt defin	ed cat	egories			
		In partici- bants without personal identification with a particular gender (n = 3)	In partici- pants without personal identification with a particular gender (n = 3)		In male partici- pants (n = 245)	In fe par pa (n =	In female partici- pants (n = 331)	Cra assor gende ar strate with cover defi	Cramér's $\varphi$ for the association between gender (men; women) and the use of strategies for dealing with feelings of guilt covered by a certain defined category <sup>b</sup>	r the ween omen) of saling iguilt irtain orth	In p pant 18-34 (n =	In partici- pants aged 18-34 years (n = 212)	In partici- pants aged 35-59 years (n = 219)	In partici- pants aged 35-59 years (n = 219)	In participants aged 60 years or older (n = 148)	rtici- aged ears Ider 148)	Crai assoc age (a 35-59 and tl gies f ee cover	Cramér's V for the association between age (age groups 18-34, 35-59 and 60+ years) and the use of strategies for dealing with feelings of guilt covered by a certain defined category	or the tween s 18-34, years) strateg with guilt eertain gory	In the ana sara	In the full analysis sample
	1	и	%	и	%	и	%	ф	95% CI LL; UL	р	и	%	и	%	и	%	>	95% CI LL; UL	d	и	%
ana feel	Self-reflection; contemplation; analyzing/reviewing things one feels guilty about	0	0.00	42	17.14	72	21.75	90.	03, .14	.213	44	20.75	42	19.18	28	18.92	.02	.01, .12	.890	114	19.69
2 Rep forg bott	2 Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt	<del></del>	33.33	20	20.41	57	17.22	04	12, .04	.389	43	20.28	14	18.72	24	16.22	.00	.01, .13	.616	108	18.65
3 Talk feel for a	Talking to someone about the feelings of guilt; asking someone for advice (other than the person(s) one is feeling guilty about)	0	0.00	38	15.51	29	20.24	90.	03, .14	.155	61	28.77	35	15.98	6	90.9	.23	.16, .31	> .001	105	18.13
feel feel broa trar assc	4 Talking to the person(s) one feels guilty about; confession of/broaching the believed moral transgressions/wrongdoings/associated feelings of guilt	<del></del>	33.33	38	15.51	29	17.82	.03	05, .11	.500	55	25.94	28	12.79	15	10.14	.19	.11, .27	< .001	86	16.93
5 (Tr) for	5 (Trying) to apologize/to ask/hope for forgiveness	_	33.33	28	11.43	40	12.08	.01	07, .08	899	42	19.81	17	7.76	10	6.76	.19	.11, .27	< .001	69	11.92
Lea hap (att	<ul><li>6 Learning from things that happened for the future; (attempts of) acting differently</li></ul>	0	0.00	30	12.24	35	10.57	03	11, .05	.594	27	12.74	27	12.33	Ξ	7.43	.07	.02, .15	.247	65	11.23
(an	empts of acting differently																				

(Table 2 continues)

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# Defined category				Frequ	ency o	of the us	se of st	Frequency of the use of strategies for dealing with feelings of guilt of different defined categories	r dealin	g with	feeling	s of gui	It of di	fferent	define	d cate	egories			
	In papants y pants y pers identification w a par ger ger (n)	In partici- pants without personal identification with a particular gender (n = 3)		In male partici- pants (n = 245)	In fe par pa (n =	In female partici- pants (n = 331)	Creassc assc gend a strat with cove	Cramér's $\phi$ for the association between gender (men; women) and the use of strategies for dealing with feelings of guilt covered by a certain defined category <sup>b</sup>	the ween omen) of aling guilt rtain	In partici- pants aged 18-34 years (n = 212)	In partici- pants aged 18-34 years (n = 212)	In participants aged 35-59 years $(n = 2.19)$	tici- aged ears 19)	In participants aged 60 years or older (n = 148)		Cra assor age (a 35-55 and t gies t fee cover	Cramér's V for the association between age (age groups 18-34, 35-59 and 60+ years) and the use of strategies for dealing with feelings of guilt covered by a certain defined category	r the .ween .8-34, years) strate- g with uilt	In the full analysis sample	ysis ple
	и	%	и	%	и	%	ф	95% CI LL; UL	р	и	%	и	%	и	%	>	95% CI LL; UL	b	и	1%
7 Self-exculpation; reattributing/ cognitively restructuring/ rationalizing things one feels guilty about; trying to put things in another perspective (e.g. by drawing comparisons with oneself or others)	0	0.00	16	6.53	31	9.37	.05	03, .13	.278	14	09.9	19	89.68	41	9.46	.04	.01, .14	.582	47	8.11
8 Professional support/therapy/ counseling	0	0.00	6	3.67	35	10.57	.13	.05, .20	.001	_	3.30	20	9.13	17 1	11.49 .	.13	.07, .20	.008	44	7.60
9 Distracting oneself	0	0.00	16	6.53	20	6.04	01	09, .07	.867	15	7.08	16	7.31	2	3.38	.07	.02, .15	.267	36	6.22
10 Wait and see/Time heals all wounds	_	33.33	20	8.16	14	4.22	08	17, .01	.053	14	09.9	13	5.94	∞	5.41	.02	.01, .12	806.	35	6.04
11 (Trying) to eliminate the underlying causes of the experienced feelings of guilt/to solve the underlying problems	0	0.00	13	5.31	21	6.34	.02	07, .10	.726	16	7.55	Ξ	5.02	<b>~</b>	4.73	.05	.02, .15	.454	34	5.87
12 (Attempts of) reparation/making amends	0	0.00	17	6.94	12	3.63	08	16, .01	.084	10	4.72	1	5.02	∞	5.41	.01	.01, .11	.970	29	5.01
13 Allowing/bearing/living with the feelings of guilt; carrying the feelings of guilt around	0	0.00	13	5.31	13	3.93	03	12, .05	.548	9	2.83	12	5.48	∞	5.41	90.	.02, .14	.365	26	4.49

(Table 2 continues)

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(Table 2 continued)

# Defined category				Frequ	ency (	of the u	se of st	Frequency of the use of strategies for dealing with feelings of guilt of different defined categories	r dealin	g with	feeling	s of gui	It of di	fferent	define	d cate	egories			
	In poparts: per: per: identii w a par ger (n)	In partici- pants without personal identification with a particular gender (n = 3)	ln pa p. p.	In male partici- pants (n = 245)	In fe par par (n =	In female partici- pants (n = 331)	Creasscasscasscasscasscasscasscasscasscass	Cramér's $\varphi$ for the association between gender (men; women) and the use of strategies for dealing with feelings of guilt covered by a certain defined category <sup>b</sup>	the ween omen) of aling guilt rtain	In par pants 18-34 (n =	In partici- pants aged 18-34 years (n = 212)	In participants aged 35-59 years (n = 219)	tici- aged ears 19)	In participants aged 60 years or older (n = 148)	tici- aged ars der 48)	Cra assor age (a 35-55 and t gies 1 fee covel	Cramér's V for the association between age (age groups 18-34, 35-59 and 60+ years) and the use of strategies for dealing with feelings of guilt covered by a certain defined category	r the ween 18-34, /ears) trrate- ; with ailt srtain	In the full analysis sample	e full ysis ple
	и	%	и	%	и	%	ф	95% CI LL; UL	р	и	%	и	%	и	%	>	95% CI LL; UL	р	и	%
14 Adhering to/accepting the believed moral trans-gressions/wrongdoings/ associated feelings of guilt	0	0.00	_	2.86	15	4.53	.04	04; .12	.379	41	09.9	5	2.28	8	2.03	Ε.	.04; .20	.029	22	3.80
15 Praying: going to confession; seeking comfort from religion/spirituality	0	0.00	_	2.86	10	3.02	.01	08, .08	1.00	2	2.36	9	2.74	9	4.05	.04	.01, .13	.635	17	2.94
16 Doing sports	0	0.00	9	2.45	3	0.91	90	14, .02	.178	4	1.89	2	2.28	0	0.00	80.	.05, .13	.237	6	1.55
17 Crying	0	0.00	_	0.41	∞	2.42	.08	.01, .13	980.	3	1.42	3	1.37	3	2.03	.02	.01, .12	.835	6	1.55
18 Consuming alcohol	0	0.00	2	2.04	4	1.21	03	11, .05	.506	_	0.47	2	2.28	3	2.03	.07	.02, .13	.323	6	1.55
19 Looking on the bright side; Focusing on positive aspects	0	0.00	-	0.41	_	2.11	.07	.00, .12	.148	4	1.89	2	0.91	7	1.35	.04	.01, .12	.826	∞	1.38
20 Doing good in compensation (not related to the specific person(s)/ event(s) one feels guilty about)	0	0.00	3	1.22	2	1.51	.01	08, .09	1.00	7	0.94	ю	1.37	3	2.03	.04	.01, .13	.754	∞	1.38
21 Rage/anger	_	33.33	2	0.82	4	1.21	.02	07, .09	.708	_	0.47	2	2.28	-	0.68	80.	.02, .15	.243	7	1.21
22 Trying to calm down/to be relaxed; use of relaxation techniques; meditation; serenity	0	0.00	-	0.41	9	1.81	90.	01, .12	.249	8	1.42	8	1.37	<del></del>	0.68	.03	.01, .11	.803	_	1.21
23 (Attempts of) self-forgiveness	0	0.00	_	0.41	2	1.51	.05	03, .11	.247	0	0.00	3	1.37	3	2.03	80.	.05, .15	.151	9	1.04
24 Going into one's shell	0	0.00	-	0.41	4	1.21	.04	04, .10	.403	-	0.47	3	1.37	-	0.68	.04	.02, .12	.652	2	98.0

Table 2

(Table 2 continued)

Ir pan							(					,								
	In particiants withou personal dentification with a particular gender (n = 3)	In participants without personal identification with a particular gender (n = 3)	In male participants (n = 245)	ale ici- rts 245)	In female partici- pants (n = 331)	nale ici- its 331)	Crar assoc gende an strate with the cover defi	Cramér's $\varphi$ for the association between gender (men; women) and the use of strategies for dealing with feelings of guilt covered by a certain defined category <sup>b</sup>	the ween of aling guilt tain	In pe pants 18-34 (n =	In partici- oants aged 18-34 years (n = 212)	In participants aged 35-59 years (n = 219)	aged years 219)	In participants aged 60 years or older (n = 148)	tici- aged ears der 148)	Cra asso age (; 35-5; and t gies fer cove	Cramér's V for the association between age (age groups 18-34, 35-59 and 60+ years) and the use of strategies for dealing with feelings of guilt covered by a certain defined category	the ween 18-34, ears) trate- with with rtain ory	In the full analysis sample	full sis ole
	и	%	и	%	и	%	ф	95% CI LL; UL	р	и	%	и	%	и	%	7	95% CI LL; UL	р	и	%
25 Depression	0	0.00	-	0.41	4	1.21	.04	05, .10	.403	0	0.00	3	1.37	2	1.35	.07	.05, .14	.314	2	98.0
26 Allowing/giving oneself a treat; enjoying beautiful things; looking after number one	0	0.00	7	0.82	2	09.0	01	09, .06	1.00	-	0.47	-	0.46	7	1.35	.05	.01, .14	.685	4	69.0
27 Keeping a diary/writing about the feelings of guilt	0	0.00	0	0.00	4	1.21	.07	.04, .11	141	-	0.47	-	0.46	2	1.35	.05	.01, .14	.685	4	69.0
28 Personal growth; life experience	0	0.00	_	0.41	3	0.91	.03	05, .09	.649	-	0.47	2	0.91	-	0.68	.02	.01, .11	1.00	4	69.0
29 (Trying to) deal with it by oneself	0	0.00	0	0.00	4	1.21	.07	.04, .11	.142	2	0.94	_	0.46	-	0.68	.03	.01, .11	.840	4	69.0
30 Grief	0	0.00	_	0.41	3	0.91	.03	05, .09	.629	0	0.00	2	0.91	2	1.35	.07	.05, .14	.464	4	69.0
31 Demeaning oneself; self-hate; self-punishment; self-harm	<del>-</del>	33.33	0	0.00	3	0.91	90.	.04, .10	.269	3	1.42	-	0.46	0	0.00	.07	.04, .13	.275	4	69.0
32 Thoughts of suicide; suicide attempts	<del>-</del>	33.33	-	0.41	7	09.0	.01	07, .07	1.00	-	0.47	2	0.91	-	0.68	.02	.01, .11	1.00	4	69.0
33 Other, rarely stated strategies (each cused by less than four participants)	0	0.00	10	4.08	∞	2.41	05	13, .03	.325	2	2.36	10	4.57	3	2.03	.07	.02, .15	.283	<u>~</u>	3.11
34 Unclear/vaguely formulated strategies for dealing with feelings of guilt	0	0.00	11	4.49	8	2.41	06	14, .03	.230	8	3.77	2	2.28	9	4.05	.04	.01, .13	.582	19	3.28
Total <sup>a</sup> 7	7	1	392	1	588	1	ı	ı	1	414	ı	363	1	210	1	ı	_	1	286	ı

Note. CI – confidence interval; LL – lower limit; UL – upper limit; Participants could make statements on different strategies for dealing with feelings of guilt. Thus, the number of categorized strategies is higher than the number of participants (in the full analysis sample as well as in the gender- and age-specific groups). b Due to the small number of study participants without personal identification with a particular gender, we did not include this group of participants in the inferential analysis of the association between the use of strategies for dealing with feelings of guilt of the different defined categories and gender.

Strategies for dealing with guilt

confession of/broaching the believed moral transgressions/wrongdoings/associated feelings of guilt" (age group 18-34/35-59/60+ years = 25.94/12.79/10.14%; Cramér's V = .19, p < .001, "(Trying) to apologize/to ask/hope for forgiveness" (age group 18-34/35-59/60+ years = 19.81/7.76/6.76%; Cramér's V = .19, p < .001), and "Adhering to/accepting the believed moral transgressions/wrongdoings/associated feelings of guilt" (age group 18-34/35-59/60+ years = 6.60/2.28/2.03%; Cramér's V = .11, p = .029). Strategies for dealing with feelings of guilt covered by the category "Professional support/therapy/counseling", by contrast, were used by significantly more participants of the two older age groups than of the younger one (age group 18-34/ 35-59/60+ years = 3.30/9.13/11.49%; Cramér's V=.13, p = .008) (see Table 2). The use of strategies of all other 29 categories was statistically independent of age.

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#### **DISCUSSION**

The present study pursued three goals. First, we aimed to provide an insight into the variety of different strategies that adults – from their own perspective – use to counter feelings of guilt. Second, we wanted to calculate the frequency of the use of the different strategies to make assumptions about their potential relative importance in adulthood. Third, we also aimed to provide information about potential gender- and age-related differences in strategies for dealing with feelings of guilt in adulthood. Findings related to all three goals may deserve a closer look.

### VARIETY OF STRATEGIES FOR DEALING WITH FEELINGS OF GUILT IN ADULTHOOD

As we assigned participants' statements on strategies for dealing with feelings of guilt to 34 different categories, it may be first and foremost concluded that adults indeed use a broad variety of different strategies for dealing with feelings of guilt.

Statements on strategies assigned to categories such as "Talking to the person(s) one feels guilty about; confession of/broaching the believed moral transgressions/wrongdoings/associated feelings of guilt", "(Trying) to apologize/to ask/hope for forgiveness", "Learning from things that happened for the future; (attempts of) acting differently", "(Trying) to eliminate the underlying causes for the experienced feelings of guilt/to solve the underlying problems", or "(Attempts of) reparation/making amends", moreover, support conclusions of numerous previous studies that feelings of guilt can have important pro-social adaptive and reparative functions (e.g., Baumeister et al., 1995; Behrendt & Ben-Ari, 2012; Silfver, 2007).

Following the famous *coping* concept, such prosocial strategy categories – especially the latter three

- may be additionally considered *problem-focused* coping, i.e., as a way of coping that is particularly used to manage or alter the problem causing distress (Lazarus & Folkman, 1984; many of the pro-social strategies may be specifically considered *problem-focused* active coping, i.e., as a "process of taking active steps to try to remove or circumvent the stressor or to ameliorate its effects"; Carver et al., 1989, p. 268).

Problem-focused coping may also refer to some of the strategies assigned to categories such as "Self-reflection; contemplation; analyzing/reviewing things one feels guilty about" (referring to those strategies that are used in the sense of the coping category planning; i.e., to strategies that are used to think about how to cope with a stressor; see Carver et al., 1989), "Talking to someone about the feelings of guilt; asking someone for advice (other than the person(s) one is feeling guilty about)" and "Professional support/therapy/counseling" (both categories referring to strategies that are used in the sense of the coping category seeking social support for instrumental reasons, i.e., to strategies that are used to seek advice, assistance, or information; see Carver et al., 1989). Some of the strategies assigned to these three categories, however, may also be considered emotionfocused coping as a way of coping that is particularly used to regulate emotional responses to the problem (Lazarus & Folkman, 1984). More specifically, efforts of "Self-reflection; contemplation; analyzing/reviewing things one feels guilty about" may, for example, lead to positive reinterpretation or acceptance of things that happened (both are coping categories considered to be emotion-focused; see Carver et al., 1989) rather than to ideas on how to cope with a stressor. In addition, talking to someone - either a layperson or an expert - may be used for seeking social support for emotional reasons (also a coping category considered to be emotion-focused; see Carver et al. 1989) rather than for instrumental reasons. Even some of the participants' statements on strategies assigned to the pro-social categories "Talking to the person(s) one feels guilty about; confession of/broaching the believed moral transgressions/wrongdoings/associated feelings of guilt" and "(Trying) to apologize/to ask/ hope for forgiveness" may be considered as examples of emotion-focused rather than problem-focused coping as the participants may have used these strategies for seeking social support for emotional reasons as well – in that case directly by the person(s) one feels guilty about (e.g., by getting sympathy or understanding; Carver et al., 1989).

Emotion-focused coping also seems to apply to many other of our defined strategy categories, such as "Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt" (corresponding to the emotion-focused coping category denial), "Self-exculpation; reattributing/cognitively restructuring/rationalizing things one feels guilty

about; trying to put things in another perspective (e.g., by drawing comparisons with oneself or others)", "Personal growth; life experience", and "Looking on the bright side; focusing on positive aspects" (corresponding to the emotion-focused coping category positive reinterpretation and growth), "Adhering to/accepting the believed moral transgressions/wrongdoings/associated feelings of guilt" (corresponding to the emotion-focused coping category acceptance), and "Praying; going to confession; seeking comfort from religion/spirituality" (corresponding to the emotion-focused coping category turning to religion; see Carver et al., 1989).

When looking at the remaining strategy categories for dealing with feelings of guilt, many of them may be considered attempts of distracting and/or disengaging oneself from the feelings or the things that have caused the feelings, including categories such as "Distracting oneself", "Going into one's shell", "Doing sports", "Wait and see/Time heals all wounds" as well as "Going for a walk/on a hike/into nature", "Sleeping", and "Keeping distance to the person(s) one feels guilty about" (three of the other, rarely stated strategies; see category 33 in Tables 1 and 2). Even though strategies of such categories may also be used as some kind of emotion-focused coping, they are - by following once more the coping taxonomy of Carver et al. (1989) - often regarded as behavioral or mental disengagement. Others of our remaining strategy categories, such as "Allowing/bearing/living with the feelings of guilt; carrying the feelings of guilt around", "Crying", "Rage/anger", and "Grief", correspond to the coping category focus on and venting of emotions (see Carver et al., 1989). The latter three coping categories - behavioral disengagement, mental disengagement, and focus on and venting of emotions - are discussed as being "less useful" by Carver et al. (1989), as they, for example, may impede active coping in some cases. Adults with feelings of guilt who are particularly using these strategies to counter the feelings may also be at risk for such negative effects. However, returning to our thoughts stated in the introduction that individuals are not always able or capable (or willing) to undertake presumably more helpful actions (prosocial and/or problem-focused strategies) or individuals may undertake these actions successfully, but feelings of guilt may still be present, the use of alternative strategies (e.g., especially emotion-focused strategies but possibly also "less useful" strategies such as disengagement) is simply required and indeed may be helpful in some cases.

Some of the participants' stated strategies for dealing with feelings of guilt can be considered harmful consequences rather than actual strategies, including for example those that have been assigned to categories such as "Consuming alcohol", "Depression", "Demeaning oneself; self-hate; self-punishment; self-harm", or "Thoughts of suicide; suicide

attempts". It cannot be distinguished whether these statements reflect guilt itself or guilt as a symptom. Someone with depressive symptoms, for example, may feel guilty as part of the disease, but may falsely interpret the depressive symptoms as a result of feeling guilty, whereas it could be vice versa. Nevertheless, adults with feelings of guilt resulting in such consequences may be in particular need of professional help. As already stated in 2021 (Luck & Luck-Sikorski, 2021a), potential treatment options in that case may be therapeutic approaches promoting forgiveness of self or self-compassion (Jung et al., 2019; Körner et al., 2015; PLoS One Staff, 2015), cognitive behavioral approaches targeting unpleasant feelings such as Acceptance and Commitment Therapy (ACT; Hayes et al., 2006; Twohig & Levin, 2017) and tailored emotion-focused, multidimensional approaches for the therapy of shame and guilt (Lammers & Herrmann, 2020).

Strategies for dealing with guilt

## FREQUENCY OF THE USE OF DIFFERENT STRATEGIES FOR DEALING WITH FEELINGS OF GUILT IN ADULTHOOD

The good news is that our findings suggest that harmful or even life-threatening "strategies" such as "Thoughts of suicide; suicide attempts" or "Consuming alcohol" are not used very often by adults for dealing with feelings of guilt ("Consuming alcohol", for example, as the most frequently used harmful strategy was stated by only 1.55% of all participants; see Table 2). Presumably less harmful and more helpful strategies were used more often:

Starting, for example, with the above stated five considered pro-social strategy categories "Talking to the person(s) one feels guilty about [...]" up to "(Attempts of) reparation/making amends", strategies of these five categories were used by 5.01 to 18.13% of the participants. Moreover, considering all 987 participants' statements on strategies for dealing with feelings of guilt, 295 (29.89%) statements were assigned to these five pro-social categories (see Table 2). These findings once more support the conclusion that feelings of guilt can have important prosocial adaptive and reparative functions. However, even though strategies of other of our defined categories may be considered pro-social as well, there is also a high proportion of strategies for which no pro-social effect is apparent. Our findings therefore also suggest that experienced feelings of guilt do not always lead to pro-social consequences. As findings of several experimental studies indicate, the pro-social nature of feelings of guilt generally seems to be more complex than originally assumed (e.g., Cryder et al., 2012; de Hooge et al., 2011; de Hooge, 2012). To select one of these studies, de Hooge et al. (2011) conducted a series of social dilemma experiments to measure prosocial behavior in multiple-person scenarios. They found "[...] that guilt motivates prosocial behavior toward a victim at the expense of others around – but not at the expense of oneself" (p. 462).

In addition to focusing on the potential pro-social consequences of feelings of guilt, we may again refer to the coping concept and especially to the above applied higher-order differentiation between problemfocused and emotion-focused coping (see Carver et al., 1989) when making assumptions about the potential importance of different groups of strategies for dealing with feelings in adulthood. Providing definite information on the frequency of the use of these two ways of coping in our sample is not possible, as many strategies used for dealing with feelings of guilt can be considered both problem- and emotionfocused coping. The difficulty of a clear distinction of different suggested coping types is also a main criticism of this and other coping taxonomies (see, e.g., Stanisławski, 2019) and one reason why we did not use such a taxonomy for our classification process. However, when simply adding up only the frequencies of the strategies of the categories that have been discussed in the previous section to be likely or possibly problem- or emotion-focused ways of coping, up to 558 (56.53%) of the 987 stated strategies could serve problem-focused functions, and even up to 728 (73.76%) could serve emotion-focused functions. Thus, strategies referring to both higher-order ways of coping seem to be very important for dealing with feelings of guilt in adulthood. Strategies referring to "less helpful" coping ways of behavioral and mental disengagement and focus on and venting emotions (see Carver et al., 1989), by contrast, seem to be of minor importance given that these strategies of the above discussed corresponding categories were used only by a limited number of participants (0.35-6.22%).

Due to the observed broad variety of different strategies for dealing with feelings of guilt, we are unfortunately unable to elaborate on every single strategy. Two likely more important or at least interesting specific findings, however, need to be addressed.

First, a considerably high number of participants used strategies assigned to the category "Repressing/ignoring/(actively) forgetting/not thinking about/bottling up the feelings of guilt" (used by n = 108/18.65% of all participants; see Table 2). As stated above, such strategies may correspond to the emotion-focused coping category denial (Carver et al., 1989). An alternative characterization of these strategies may be achieved by the term repressive coping. Following the description of Garssen (2007) that repression – referring to "the tendency to inhibit [...] the experience and expression of negative emotions or unpleasant cognitions" - is used "to prevent one's positive self-image from being threatened" (p. 479), it seems reasonable that this type of strategy is also used by many adults to counter feelings of guilt.

Second, 7.60% (*n* = 44) of all participants with feelings of guilt utilized "Professional support/therapy/counseling" (see Table 2). This proportion is not huge, but since many adults are confronted with feelings of guilt – the point prevalence for the German adult population, for example, is 10.6%; Luck and Luck-Sikorski (2021a) – and it can, moreover, be assumed that (as usual) more adults may need professional help than actually utilize it (this refers, for example, to those adults who used the above stated harmful "strategies" of "Consuming alcohol" up to "Thoughts of suicide; suicide attempts"), feelings of guilt are an issue relevant for mental health care.

#### GENDER- AND AGE-RELATED DIFFERENCES IN STRATEGIES FOR DEALING WITH FEELINGS OF GUILT IN ADULTHOOD

In addition to a slight but statistically significant difference in the average total number of strategies used for dealing with feelings of guilt, the only other observed gender-related difference in our study was that female participants significantly more frequently utilized "Professional support/therapy/counseling" than male participants. The more frequent use of such strategies specifically in female participants may be not completely unexpected, as, in general, more women than men in Germany utilize the help of psychotherapists or psychiatrists (Rommel et al., 2017).

A more important gender-related finding, however, certainly is that male and female participants did not show any other significant difference in the use of strategies for dealing with feelings of guilt. By referring to existing blanket stereotypes about women, one may have expected that female participants, for example, may have used emotion-focused strategies more frequently, as women have a greater emotionality than men. Alternatively, one may have expected that female participants may have used particularly pro-social strategies more frequently, such as "Talking to the person(s) one feels guilty about; confession of/broaching the believed moral transgressions/ wrongdoings/associated feelings of guilt", "(Trying) to apologize/to ask/hope for forgiveness" or "(Attempts of) reparation/making amends", as women are the more social gender.

Both stereotypes have already been proven wrong in the past. Else-Quest et al. (2012), for example, who conducted a meta-analysis on study results regarding potential gender differences in self-conscious emotions such as guilt, shame, pride, and embarrassment, found only small gender differences (d=-.01 to -.27) that were moreover dependent on the ethnicity of the sample, on the assessment of guilt and on factors other than gender in general. Olsson et al. (2021), who assessed gender differences in prosocial self-perceptions, behavioral intentions, and behavior

Tobias Luck, Claudia Luck-Sikorski in same- and other-gender interactions in 10 countries with n=1,915 participants, concluded based on their findings that "there is no 'more helpful' gender. Instead, gender differences in prosociality are dynamic and contextual" (p. 1330). Our findings also contradict corresponding blanket gender stereotypes. Moreover, the observed minimal gender differences in strategies for dealing with feelings of guilt in this study perfectly fit our previous gender-related findings on guilt, showing no differences between women and men in the point and lifetime prevalence of feelings of guilt in the German adult population as well as more similarities than differences in reasons for feeling guilty between women and men (Luck & Luck-Sikorski, 2021a, b, 2022).

"More similarities than differences" may also apply to our age-related findings on strategies for dealing with feelings of guilt. Regarding the observed differences between the participants of different ages, the lower average total number of strategies used in older participants may be attributed to the also lower average total number of stated reasons for feeling guilty in older adults (see Luck & Luck-Sikorski, 2022) - the fewer things one feels guilty about, the fewer different strategies may be required for dealing with these feelings. Moreover, it may be speculated that with increasing age, adults need fewer strategies, as older adults are in general more capable of dealing with feelings of guilt and/or know better which strategies are effective due to greater life experience. Such speculations, however, are also not far from certain blanket stereotypes - at this point not far from an age-related stereotype such as older adults being automatically wiser than younger ones.

The risk of referring to certain age-related stereotypes is also present when attempting to find possible explanations for the observed differences in the use of strategies of some specific categories between younger and older participants: Have the younger adults (18-34 years), for example, more frequently used strategies of the categories "Talking to someone about the feelings of guilt; asking someone for advice (other than the person(s) one is feeling guilty about)" and "Talking to the person(s) one feels guilty about; confession of/broaching the believed moral transgressions/wrongdoings/associated feelings of guilt" than the older ones (35-59/60+ years), as members of the "younger generation" are, on average, more capable of talking about their feelings with relevant others? Conversely, were the older adults required to more frequently seek "Professional support/therapy/counseling" than the younger ones, as members of the "older generations", are, on average, less capable of talking about their feelings with relevant others in the private sphere? Further studies may be required to investigate the reasons for age-related differences in strategies for dealing with feelings of guilt more deeply to avoid such speculations leading to (re)producing certain stereotypes. Irrespective of the open question of the "true" reasons for observed agerelated differences, it can be concluded that neither the age nor the gender of an individual seems to be a strong explanatory factor for the individual's use of a specific strategy for dealing with feelings of guilt.

#### LIMITATIONS

Our study is not without limitations. Some of these limitations have already been described in detail elsewhere (see Luck & Luck-Sikorski, 2022): for example, we collected information on feelings of guilt using a web-based survey, as we suggested that this rather anonymous approach (when compared to interviews) would make it easier for people to share sensitive personal information. Additionally, we received support in the recruitment of participants from a fieldwork agency with an online panel of registered users. These procedures indeed enabled us to collect information on feelings of guilt from a significant number of adults. However, the findings may not be representative of the German general adult population, as we, for example, (i) did not reach out for adults without access to the internet/online surveys and/or without corresponding digital competences (Luck & Luck-Sikorski, 2022) and (ii) included a higher proportion of adults with higher education entrance qualifications in our adult sample than is present in the German general adult population (49.9% vs. 31.9%; Destatis, 2022). Moreover, depressive symptoms were also more common in our sample than in the general population (M/SD PHQ-9 depression scale total score = 6.83/4.91 points vs. 2.7/3.5 (men) and 3.1/3.5 (women); Kocalevent et al., 2013). The latter, however, may not be a surprising result, as our sample only included adults with experienced feelings of guilt, and such feelings are significantly associated with depressive symptoms (Luck & Luck-Sikorski, 2021a, b).

Another limitation specifically refers to the questions on guilt in the survey: we asked for currently and in the past experienced feelings of guilt in a very simple manner by using the above stated questions and did not provide any further information (such as a definition of guilt, for example). This approach allowed us to obtain a rather unrestricted impression of feelings of guilt in German adults (information on reasons for feeling guilty or strategies for dealing with the feelings from their own particular perspective). Without any information on what guilt is and what guilt is not, it is, however, possible that some participants may have confused certain things (e.g., feelings of guilt with feelings of shame), and this, of course, may have also influenced the participants' answers on strategies for dealing with the feelings. Additionally, in the survey, we did not ask after every stated reason for feeling guilty for the strategies

Strategies for dealing with guilt the participants have used/are using for dealing with the feelings related specifically to this stated reason. Instead, we asked more generally about the strategies used – see above; "How are you dealing/how did you deal with your feelings of guilt? (i.e., What are/were your strategies for dealing with feelings of guilt?)". A link between specific reasons and specific strategies would have provided additional fruitful insights into the motives/requirements/reasons for using certain strategies.

Tobias Luck, Claudia Luck-Sikorski Finally, we inductively classified the strategies for dealing with feelings of guilt in our study. The reasons for this classification approach have already been explained in the analysis section (see above), but it is nonetheless likely that other independent researchers may have classified the strategies differentially (e.g., by defining other/further/fewer categories and/or by assigning strategies to other categories). Due to these limitations, generalizations about the German general adult population should be made with caution.

#### **CONCLUSIONS**

Irrespective of these limitations, we think that our findings derived from a large sample of adults are robust enough to conclude that (a) adults use a broad variety of different strategies for dealing with feelings of guilt, (b) neither gender nor age of an individual seems to be a strong explanatory factor for the individuals' use of a specific strategy for dealing with feelings of guilt, (c) many applied strategies serve pro-social functions, but as there is also a high proportion of strategies for which no such functions are apparent, experienced feelings of guilt may not always lead to pro-social consequences, (d) both - strategies targeting the problem that causes the feelings of guilt and strategies regulating emotional responses to the problem - are used very often; emotion-focused strategies may be used even more often than problem-focused ones, (e) among emotionfocused strategies, those of "Repressing/ignoring/ (actively) forgetting/not thinking about/bottling up the feelings of guilt" seem to be of particular importance – presumably as they are specifically helpful in preventing an individual's positive self-image from being threatened by the negative guilt experiences, (f) harmful "strategies" such as "Consuming alcohol", "Demeaning oneself; self-hate; self-punishment; selfharm", or "Thoughts of suicide; suicide attempts", by contrast, are rather rare, and thus, presumably of minor importance, (g) feelings of guilt are nonetheless an issue relevant for mental health care since several of the adults with such feelings utilize "Professional support/therapy/counseling", and an even higher number may need professional help. These conclusions, of course, have to be confirmed by additional, preferably population-based studies.

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