

Candidate number: 10044

Anxiety- And Depression Symptoms in Anxiety Disorders

Do Early-, Mid-, and Late-Adults Report Similar
Levels of Distress?

Bachelor's thesis in Psychology
Supervisor: Martin Brattmyr
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Preface

This study is one of several based on the same dataset, all supervised by Martin Brattmyr. Each study has a distinct design and aim, and the research topic for the current study was my own. The topic is inspired by the work of Schat et al. (2017), who examined similar characteristics using a comparable sample. The sample in this study was acquired from Nidaros DPS, so great gratitude is extended to them for allowing research to be done on data collected through their outpatients. Brattmyr had already collected and prepared the dataset, which allowed me to focus my time and effort on the research topic, data analysis, and thesis writing. The choice of methods for statistical analysis was based on discussions with Brattmyr and my prior statistical knowledge. The analysis and writing were both carried out independently, and the relevant literature for this thesis was primarily found through extensive searches on Google Scholar and PubMed.

Finally, there are several people who deserve praise. First, a big thank you to my supervisor Martin Brattmyr. Throughout the writing process, Brattmyr was of excellent help, providing great support and valuable feedback on both the research topic and the content itself. Additionally, through support and feedback, the fellow students supervised by Brattmyr all contributed to the making of this thesis, so special thanks to them as well. Lastly, I want to thank my girlfriend for her continuous support and her consistent ability to put a smile on my face.

Abstract

Understanding age-related differences in mental disorders is essential for improving assessment and treatment. Anxiety disorders, as some of the most prevalent mental illnesses, warrant appropriate attention. This study investigated age-related differences in anxiety- and depression-related symptoms in outpatients diagnosed with anxiety disorders. The sample, collected from Nidaros DPS during a 28-month period from February 2020 to May 2022, comprised 620 participants after excluding 2,157 individuals with missing diagnosis data or without an anxiety disorder diagnosis. Participants were divided into early-, mid-, and late-adult age groups. Data were obtained from several assessment questionnaires, including General Anxiety Disorder-7 and Patient Health Questionnaire-9. Chi-square tests, using Cramer's V as the effect size measure, and analysis of variance (ANOVA) tests, with Eta squared for effect size, were employed for categorical and interval data comparisons, respectively. The findings showed a significant decrease in levels of irritability, fatigue, poor appetite, and suicidal ideation with each successive age group. Older individuals tend to experience more somatic and fewer cognitive symptoms, highlighting the need to study the symptomatology of mental disorders. These results suggest that clinicians might benefit from adapting the assessment and treatment of anxiety disorders based on age to provide more targeted and effective interventions.

Anxiety- And Depression Symptoms in Anxiety Disorders: Do Early-, Mid-, and Late-Adults Report Similar Levels of Distress?

Ageing is an inevitable aspect of life that entails both physiological and psychological changes. The symptoms of mental disorders are tightly interwoven with an individual's psychological and physiological states, highlighting the importance of exploring these nuances in relation to age. As the world's population continues to age, gaining a deeper understanding of the influence of age on mental health becomes increasingly vital for accurate assessment and effective treatment of mental disorders.

By studying differences at the symptom level, we can identify subtle variations that might otherwise be missed at a diagnostic level (Fried & Nesse, 2015; Kotov et al., 2017). Focusing on symptoms allows for more fine-grained analysis, revealing specific patterns and associations that could be critical in understanding the nuances of mental disorders. Additionally, symptom-level investigations can help uncover potential transdiagnostic features shared across different disorders, furthering our knowledge of the underlying mechanisms and informing more tailored treatment approaches (Caspi et al., 2013; McLaughlin & Nolen-Hoeksema, 2011). Furthermore, considering that mental disorders often co-occur and have overlapping symptoms, a symptom-focused approach may provide a clearer understanding of the relationships and potential shared etiologies among disorders (Beekman et al., 2000; Kessler et al., 2005). Therefore, examining mental disorders at the symptom level offers valuable insights that can enhance our understanding of the complex nature of mental health, ultimately leading to more effective and personalised care for patients.

Some of the most common mental disorders faced by individuals across the globe are anxiety disorders (Steel et al., 2014). With an estimated global prevalence of 7.3% (Baxter et al., 2012) and a lifetime prevalence of 34% in the US alone (Szuhany & Simon, 2022),

anxiety disorders and their associated symptoms warrant appropriate attention.

Anxiety disorders encompass a wide range of conditions, including generalised anxiety disorder, panic disorder, social anxiety disorder, and specific phobias. Furthermore, these disorders often co-occur with depression, creating a complex interplay between anxiety- and depression symptoms (Beekman et al., 2000; Showraki et al., 2020). Additionally, many people who are diagnosed with depression are experiencing problems that more accurately align with an anxiety disorder diagnosis (Horwitz, 2010). This makes both anxiety- and depression characteristics important aspects to consider when researching anxiety disorders.

Previous research has demonstrated that symptoms of anxiety and depression can manifest differently across various age groups (Brenes et al., 2008; Hobbs et al., 2014; Husain et al., 2005; Schat et al., 2017; Thompson et al., 2021). Factors such as life phases, life experiences, coping strategies, and biological changes associated with ageing may influence the presentation and severity of these symptoms (Carstensen et al., 1999; Grossmann, 2017; Helson et al., 2014; Schat et al., 2017; Wong et al., 2020).

Given these changes, what age-related differences in anxiety- and depression symptoms could exist? In a study of outpatients with anxiety disorders, Schat et al. (2017) found that hostility and sleep-related problems decrease with age, while physical functioning increases with age. Irritability (Hobbs et al., 2014; Husain et al., 2005; Thompson et al., 2021) and levels of fatigue (Hobbs et al., 2014; Thompson et al., 2021) have also been found to decrease with age, whereas sleep disturbance increases (Hobbs et al., 2014; Husain et al., 2005; Thompson et al., 2021). Thompson et al. (2021) also discovered that older people reported being more affected by uncontrollable worrying. Furthermore, among depression symptoms, younger people tended to report more cognitive problems and negative affect,

while older people reported less dysphoria (Brenes et al., 2008). Suicidal ideation, closely linked to anxiety disorders (Thibodeau et al., 2013), has also been found to exhibit higher risk in relation to age (Stanley et al., 2018). Lastly, feelings of hopelessness have been reported more frequently in younger individuals (Husain et al., 2005).

The present study aims to expand on this knowledge by investigating whether early-, mid-, and late-adults with anxiety disorders report similar levels of distress related to symptoms of anxiety and depression. Using a cross-sectional design, this research will compare the symptomatology of anxiety and depression among outpatients with anxiety disorders across the three age groups. Understanding these differences may further expand our knowledge of the intricate interplay between age and symptom-expression, offering important insights for healthcare professionals. By elucidating the distinct factors that change the expression of mental disorders, clinicians may improve their assessment. Moreover, knowledge of demographic characteristics that may affect symptomatology can enable the creation of more personalised treatment plans, tailored to the unique needs of each individual.

In this study, it is important to acknowledge the potential impact of sampling bias, as the research is limited to outpatients who have actively sought help for their mental health issues. This constraint may result in an overrepresentation of individuals with more severe symptoms or those more motivated to engage in treatment (Berkson, 1946). Known as Berkson's bias, this phenomenon occurs when the probability of selecting a participant is related to the severity of their disorder and their willingness to seek treatment, leading to a biased sample that might not accurately reflect the general population of individuals with anxiety disorders (Berkson, 1946). It is essential to consider the potential implications of this sampling bias when interpreting the findings, as they may not be generalisable to

the wider population of individuals with anxiety disorders who are not participating in outpatient treatment.

So, do early-, mid-, and late-adult outpatients with anxiety disorders report similar severity of symptoms of anxiety and depression? Based on previous findings, it is hypothesised that older individuals will report lower levels of irritability (Hobbs et al., 2014; Husain et al., 2005; Thompson et al., 2021) and tiredness (Hobbs et al., 2014; Thompson et al., 2021) compared to younger adults. Moreover, an increase in reported uncontrollable worrying (Thompson et al., 2021) and suicidal ideation with age is also anticipated (Stanley et al., 2018).

1 Method

1.1 Procedure and design

From February 2020 to May 2022, data were collected electronically from the public outpatient mental health clinic Nidaros DPS. Prior to treatment, patients were sent a questionnaire asking them to participate in data collection by answering various standardised mental health, quality of life, and functioning-related questionnaires (see [Measures](#)). Of all the patients asked, 68% consented to participate. In addition to the questionnaire data, demographic information such as relationship status and register data containing information about diagnoses were collected.

This study employs a cross-sectional design. It adheres to the ethical principles set forth by the 7th revision of the Declaration of Helsinki, as well as the laws and regulations of Norway. The regional committee for medical and health ethics, REK Midt-Norge, has approved the usage of the dataset (REK 2019/31836). In addition, the Norwegian Centre

for Research Data (NSD) has granted project approval (NSD 2020/605327). To ensure data protection, an impact assessment was conducted in collaboration with NSD.

1.2 Sample

The dataset consisted of 2,777 outpatients. Among these participants, 655 (23.6%) were excluded due to the unavailability of diagnostic data. Furthermore, an additional 1,500 participants (54.0%) were excluded because they had not been diagnosed with an anxiety disorder. In order to avoid attenuating the results, two elderly patients aged 66 years and 70 years were excluded. Consequently, 620 participants (22.3%) were included in the following analyses. The mean age among the included participants was 30.8 years ($SD = 9.99$), with 185 (29.8%) being male.

1.3 Measures

Demographic, clinical, and questionnaire data were collected. The demographic data were extracted for age, gender, work status, and relationship status. The latter two variables were manually converted from free text responses to binary values, wherein employment status was categorised as either on sick leave or not, and relationship status as single or otherwise. Clinical information included a binary value indicating the presence or absence of a diagnosis within a specific ICD-10 diagnostic subsection. In total, six subsections were included: mood/affective disorders (F30–F39); anxiety, dissociative, stress-related, somatoform, and other non-psychotic mental disorders (F40–F49); behavioural syndromes associated with physiological disturbances and physical factors (F50–F59); disorders of adult personality and behaviour (F60–F69); disorders of psychological development (F80–F89); and behavioural and emotional disorders with onset usually occurring in childhood

and adolescence (F90–F98).

In this study, two measurement instruments are utilised. The General Anxiety Disorder-7 (GAD-7) is a questionnaire designed to screen for general anxiety disorders (GAD) and assess their severity (Spitzer et al., 2006). Comprising seven items, the GAD-7 employs a 4-point Likert scale that ranges from 0 (not at all) to 3 (nearly every day) and inquires about the frequency and severity of anxiety symptoms experienced over the past two weeks. Multiple studies have evaluated the GAD-7, and it has consistently demonstrated strong internal validity and reliability (Beard & Björgvinsson, 2014; Kertz et al., 2012; Löwe et al., 2008).

The Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001) serves as a tool to assess the severity of depression symptoms and has proven to be both reliable and valid (Kroenke et al., 2001; Martin et al., 2006). Comprising nine items, the PHQ-9 employs the same 4-point Likert scale as the GAD-7.

1.4 Statistical analyses

The categorical variables are presented as numbers and valid percentages, while interval variables are displayed as means and standard deviations. Both linear- and categorical comparisons were conducted using the statistical software *IBM SPSS Statistics version 28.0.1.0*. Categorical analyses were performed to test for significant differences between age groups in demographic and comorbidity characteristics, anxiety symptoms, depression symptoms, symptoms of impaired functioning, and perceptions of health and health-related quality of life. Additionally, a linear comparison was conducted with respect to age.

The comparisons involving categorical data were conducted using Chi-square tests at a

comprehensive level, with Cramer’s V as the effect size measure. Post-hoc pairwise tests were conducted using Phi to determine the effect size of group differences and their significance. The subsequent three analyses, which involved interval data, employed Analysis of Variance (ANOVA) to test for significant differences at a comprehensive level, with Eta squared to measure effect size. Post-hoc pairwise testing was performed using t -tests to identify which groups had significant differences, and their effect sizes were measured using Cohen’s d .

Bonferroni correction was considered for the post-hoc tests, though ultimately not applied since there were only three pairwise tests, and incorporating such correction would have further increased the likelihood of a Type II error (Armstrong, 2014). The linear comparison was conducted using linear regression with age as the dependent variable.

2 Results

The patients were divided into three age groups: early-adult (age 18–25 years; $n = 237$; $M_{\text{age}} = 22.5$, $SD_{\text{age}} = 1.8$), mid-adult (age 26–40 years; $n = 285$; $M_{\text{age}} = 31.2$, $SD_{\text{age}} = 4.1$), and late-adult (age 41–65 years; $n = 98$; $M_{\text{age}} = 49.9$, $SD_{\text{age}} = 6.7$).

2.1 Demographic and comorbidity characteristics

Table 1 shows the results from the comparisons made between the age groups on both demographic characteristics and clinical diagnoses. There was a significant relationship between age group and sex, $\chi^2(2, n = 620) = 7.00$, $p = .030$, $V = .106$, where the percentage of male to female increases for each age group. A pairwise phi analysis post-hoc found a significant association between the early-adult group and late-adult group, $\phi = .140$, $p = .010$. Being single was also significantly associated with age group, $\chi^2(2,$

$n = 547$) = 18.99, $p < .001$, $V = .186$. A pairwise post-hoc analysis found a significant association between the early-adult group and mid-adult group, $\phi = -.144$, $p = .002$, and the early-adult group and late-adult group, $\phi = -.242$, $p < .001$. The greatest significant association was found between age group and being on sick leave, $\chi^2(2, n = 539) = 90.48$, $p < .001$, $V = .410$. The pairwise post-hoc analysis found a significant association between the early-adult group and mid-adult group, $\phi = .383$, $p < .001$, and the early-adult group and late-adult group, $\phi = .497$, $p < .001$. There were no significant associations found between the age groups and any comorbid diagnosis.

Table 1: *Descriptive analysis of demographic and comorbidity characteristics per age group, including categorical and linear comparisons.*

	Early-adult (E) 18–25 ($n = 237$)		Mid-adult (M) 26–40 ($n = 285$)		Late-adult (L) 41–65 ($n = 98$)		Categorical Comparison							
	n	%	n	%	n	%	Comprehensive		Pairwise Phi Association			Linear Comparison		
							χ^2	Cramer's V	E–M	E–L	M–L	B	95% CI	
Age, M (SD)	22.5 (1.8)		31.2 (4.1)		49.9 (6.7)									
Male	63	27	82	29	40	41	7.00*	.106	.024	.140*	.113	2.05**	[0.33, 3.76]	
Single	129	65	130	50	35	39	18.99***	.186	-.144**	-.242***	-.101	-3.75***	[-5.43, -2.07]	
Sick leave	34	17	136	54	58	67	90.48***	.410	.383***	.497***	.117	7.28***	[5.66, 8.90]	
Comorbidity ^a														
F30–F39	54	23	67	24	20	20	0.40	.025	–	–	–	0.40	[-1.49, 2.28]	
F50–F59	6	3	6	2	0	0	2.42 ^b	.062	–	–	–	-3.54	[-9.26, 2.18]	
F60–F69	24	10	22	8	6	6	1.75	.053	–	–	–	-1.95	[-4.79, 0.89]	
F80–F89	7	3	9	3.2	2	2	0.33	.023	–	–	–	-3.52	[-8.21, 1.17]	
F90–F98	26	11	33	12	8	7	1.55	.050	–	–	–	-1.43	[-3.99, 1.13]	

Note. Frequency by valid percentage.

* $p < .05$, ** $p < .01$, *** $p < .001$

^aOther diagnoses in addition to anxiety disorder (ICD-10). ^b2 cells with expected frequency less than 5.

2.2 Anxiety symptoms

Comparison results of anxiety symptoms across the three age groups, as measured by the GAD-7, are presented in Table 2. A significant difference between the means was found on Item 6 (*becoming easily annoyed or irritable*), $F(2, 616) = 3.51$, $p = .031$, though an Eta squared value showed a very small effect size, $\eta^2 = .011$. A post-hoc analysis with Cohen's d showed a significant small-to-moderate effect size between the mid-adult group

and late-adult group, $\Delta M = 0.30$, $t(381) = 2.67$, $p = .008$, $d = .31$.

Table 2: *Analysis of anxiety symptoms as measured from General Anxiety Disorder-7 (GAD-7) instrument per age group.*

	Descriptive Statistics						Categorical Comparison							
	Early-adult (E) 18–25 ($n = 237$)		Mid-adult (M) 26–40 ($n = 285$)		Late-adult (L) 41–65 ($n = 98$)		Comprehensive		Cohen’s d Post-Hoc			Linear Comparison		
	M	SD	M	SD	M	SD	F	Eta Squared	E–M	E–L	M–L	B	95% CI	
Item 1	2.33	0.82	2.26	0.87	2.28	0.86	0.42	.001	–	–	–	-0.40	–	
Item 2	2.03	0.89	2.03	0.91	2.06	0.91	0.05	.000	–	–	–	-0.20	–	
Item 3	2.14	0.88	2.14	0.89	2.23	0.82	0.46	.002	–	–	–	0.18	–	
Item 4	2.16	0.92	2.12	0.89	2.13	0.90	0.09	.000	–	–	–	-0.07	–	
Item 5	1.41	0.96	1.36	1.01	1.43	1.14	0.21	.001	–	–	–	-0.08	–	
Item 6	1.44	0.95	1.53	0.92	1.23	0.10	3.51*	.011	.09	.22	.31**	-0.90*	[-1.73, -0.07]	
Item 7	1.40	1.02	1.39	1.00	1.46	1.07	0.20	.001	–	–	–	-0.08	–	

Note. Items are rated from 0–4. Item 1: Feeling nervous, anxious, or on edge. Item 2: Not being able to stop or control worrying. Item 3: Worrying too much about different things. Item 4: Trouble relaxing. Item 5: Being so restless that it’s hard to sit still. Item 6: Becoming easily annoyed or irritable. Item 7: Feeling afraid as if something awful might happen.

* $p < .05$, ** $p < .01$

2.3 Depression symptoms

Table 3 displays the comparison of depression symptoms among the three age groups, using the PHQ-9 as the assessment tool. Significant differences were found on three items. Item 4 (*feeling tired or having little energy*), $F(2, 612) = 3.23$, $p = .040$, $\eta^2 = .010$, showed a small effect size in a post-hoc analysis between the early-adult group and late-adult group, $\Delta M = 0.25$, $t(331) = 2.26$, $p = .025$, $d = .28$, and mid-adult group and late-adult group, $\Delta M = 0.24$, $t(378) = 2.39$, $p = .017$, $d = .28$. Item 5 (*poor appetite or overeating*), $F(2, 612) = 5.22$, $p = .006$, $\eta^2 = .017$, also showed two significant post-hoc tests. A small effect size between the early-adult group and mid-adult group, $\Delta M = 0.25$, $t(515) = 2.76$, $p = .006$, $d = .24$, and a small-to-moderate effect size between the early-adult group and late-adult group, $\Delta M = 0.34$, $t(331) = 2.64$, $p = .009$, $d = .32$. Item 9 (*thoughts that you would be better off dead, or of hurting yourself*), $F(2, 611) = 3.97$, $p = .019$, $\eta^2 = .013$, had a significant difference with small-to-moderate effect size between the early-adult group and late-adult group, $\Delta M = 0.33$, $t(330) = 2.85$, $p = .005$,

$d = .34$, and a small effect size between the mid-adult group and late-adult group $\Delta M = 0.22$, $t(377) = 2.05$, $p = .041$, $d = .24$.

Table 3: *Analysis of depression symptoms as measured from Patient Health Questionnaire-9 (PHQ-9) instrument per age group.*

	Early-adult (E) 18–25 ($n = 237$)		Mid-adult (M) 26–40 ($n = 285$)		Late-adult (L) 41–65 ($n = 98$)		Categorical Comparison						
							Comprehensive		Cohen’s d Post-Hoc			Linear Comparison	
	M	SD	M	SD	M	SD	F	Eta Squared	E–M	E–L	M–L	B	95% CI
Item 1	1.75	0.94	1.84	0.90	2.02	0.95	2.98	.010	–	–	–	1.05*	[0.20, 1.90]
Item 2	1.87	0.95	1.87	0.92	1.99	0.94	0.69	.002	–	–	–	0.45	–
Item 3	2.24	0.90	2.15	0.94	2.11	0.97	0.79	.003	–	–	–	-0.48	–
Item 4	2.29	0.88	2.28	0.83	2.04	0.95	3.23*	.010	.00	.27*	.28*	-1.02*	[-1.92, -0.11]
Item 5	1.96	1.04	1.71	1.03	1.62	1.09	5.22**	.017	.24**	.32**	.08	-1.02**	[1-82, -0.31]
Item 6	2.19	0.96	2.21	0.93	2.08	0.97	0.70	.002	–	–	–	-0.50	–
Item 7	1.85	1.03	1.70	0.98	1.80	0.92	1.54	.005	–	–	–	-0.43	–
Item 8	0.99	0.98	0.86	0.91	0.98	1.06	1.40	.005	–	–	–	-0.20	–
Item 9	1.02	1.01	0.91	1.00	0.69	0.78	3.97*	.013	.10	.34**	.24*	-1.52***	[-2.32, -0.70]

Note. Items are rated from 0–4. Item 1: Little interest or pleasure in doing things. Item 2: Feeling down, depressed, or hopeless. Item 3: Trouble falling or staying asleep, or sleeping too much. Item 4: Feeling tired or having little energy. Item 5: Poor appetite or overeating. Item 6: Feeling bad about yourself or that you are a failure or have let yourself or your family down. Item 7: Trouble concentrating on things, such as reading the newspaper or watching television. Item 8: Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual. Item 9: Thoughts that you would be better off dead, or of hurting yourself.

* $p < .05$, ** $p < .01$, *** $p < .001$

3 Discussion

The findings demonstrate significant differences in levels of irritability, fatigue, poor appetite, and suicidal ideation across age groups, with a decrease in these symptoms observed as age increases. These symptoms are predominantly non-somatic, underscoring the importance of examining age-related variations at the symptom level rather than the diagnostic level, where such nuances may not be readily apparent.

In line with the first hypothesis, the results show that both irritability and tiredness were reported significantly less by people in the late-adult group. It should be noted that the reported levels of irritability did increase slightly from the early-adult to the mid-adult group but decreased more extensively between the mid-adult and late-adult groups. Post-hoc testing showed that a significant difference was only found between

the latter two age groups. Hobbs et al. (2014) found similar results, with only a minor decrease in irritability found between the age groups 16–29 years and 30–44 years, and more considerable decreases in the age groups 45–59 years and 60+ years. A potential factor contributing to this finding is the psychological resilience that usually develops as people age (Faye et al., 2018; Gooding et al., 2011; Ong et al., 2009). Gooding et al. (2011) found that resilience consists largely of increased emotional regulation skills. Therefore, the older the patient, the better their emotional regulation ability might be, allowing them to better offset the irritability that might accompany ageing. Sampling bias could be another factor at play here. There might be a group of individuals with high levels of irritability who never seek help. Since the sample of this study consists only of people who have sought help, these individuals are not represented in the findings. Therefore, the finding that older individuals report lower levels of irritability could be explained by their increased ability for emotional regulation, or it could be a case of sampling bias.

Additionally, levels of tiredness decreased across all age groups, but the difference in tiredness between the late-adult group and both the young adult and mid-adult groups was the only significant finding. This further highlights that the outcomes from the late-adult group are more notable compared to the early- and mid-adult groups. Typically, ageing is associated with becoming frailer, and several factors that contribute to tiredness and fatigue, such as pain, sleep problems, and stress (Poluri et al., 2005), have been shown to increase with age (Husain et al., 2005; Mander et al., 2017). Consequently, the findings of the present study might seem counterintuitive, but similar results have been found in existing studies (Hobbs et al., 2014; Thompson et al., 2021). As with irritability, the psychological resilience accompanying age could play a part, or it could be another case of sampling bias. Psychological resilience has been found to offset risk factors for

disorders such as depression (Fiske et al., 2009), and might result in older adults shifting their focus to activities that induce well-being and promote positive emotional experiences. Considering these factors, the decrease in tiredness observed for each successive age group could be explained by psychological resilience, or be a case of sampling bias, where there might be a group of older adults who are too tired to seek help.

The second hypothesis posited that late-adults would report higher levels of uncontrollable worrying. In contrast, the results did not reveal any significant difference in uncontrollable worrying between the age groups. Several reasons could explain this. The article by Thompson et al. (2021), which found a significant difference between age and difficulty controlling worrying, included participants who had experienced a depression disorder as well as those who had experienced an anxiety disorder. By comparison, the present study only looked at patients with anxiety disorder, so there could exist a discrepancy here. In a study using a sample without any disorder criteria, Basevitz et al. (2008) found older adults to report less uncontrollable worrying stating that late adulthood comes with reduced worry-proneness. Furthermore, it has been suggested that older adults may possess better coping strategies, which, in combination with the potential increase in emotional regulation as previously mentioned, could contribute to a decreased level of uncontrollable worrying (Blanchard-Fields, 2007; Urry & Gross, 2010). By offsetting the increase in uncontrollable worrying, better coping strategies and improved emotional regulation ability could explain the finding that no significant difference in uncontrollable worrying was identified.

In contrast to the third hypothesis, the late-adult age group exhibited a significant decrease in suicidal thoughts compared to both the early- and mid-adult age groups. One potential explanation for this finding is sampling bias. In their study, Rossom et al. (2017)

found suicidal ideation to be a robust predictor of suicide attempts, regardless of age, and that suicide death rates are highest among older adults. The findings of the present study might indicate that older adults show lower levels of suicidal ideation; however, this could be explained by the sample not including older adults with higher levels of suicidal ideation who have died by suicide. Another potential explanation for this discrepancy might be related to the specific age-ranges included in the sample. Cabello et al. (2019), who examined suicide ideation rates worldwide, found that the elderly population had higher rates of suicidal ideation and attempts. However, their study employed a threshold age of 65 years to classify individuals as "older," while the present study only included those aged 65 years and below. As a result, significant increases in suicidal ideation may occur in individuals above the age of 65 years. A similar result was found by Kjølner and Helweg-Larsen (2000), where reported levels of suicidal ideation decreased with age from young adulthood to 66 years, only to surge in older individuals. Therefore, the finding that late-adults reported less suicidal ideation than younger adults could be a case of sampling bias, or it might be that levels of suicidal ideation generally rise after 65 years of age.

Although not part of the original hypotheses, another notable finding emerged: mid- and late-adult groups reported fewer appetite- and eating-related issues. This observation could be attributed to several factors. For one, research has shown that younger women tend to report more eating-related problems (Silén & Keski-Rahkonen, 2022; Smink et al., 2012), and both the early- and mid-adult groups in this study comprised over two-thirds female participants. Furthermore, males have been found to underreport their eating issues in some instances (Hackler et al., 2010; Mond & Arrighi, 2011; Strother et al., 2013). Another contributing factor could be that older adults may have a different perception of what constitutes "poor appetite or overeating." On average, older individuals tend

to consume smaller portions and experience less hunger than their younger counterparts (Elsner, 2002). Additionally, their perspectives on food and eating habits may vary. Each of these factors, separately or in combination, could contribute to the observed significant difference observed, wherein older adults reported fewer appetite- and eating-related issues.

An interesting demographic observation is that the majority of participants were female, although this trend decreased with age group, going from 27% in the early-adult group to 41% in the late-adult group. A similar pattern was found by Schat et al. (2017), who also used a sample consisting of individuals diagnosed with an anxiety disorder. Examining gender differences across various anxiety disorders, McLean et al. (2011) found that women were more likely than men to receive an anxiety disorder diagnosis throughout their lives. Additionally, some clinical studies indicate that women have an earlier onset of anxiety disorders compared to men (McLean et al., 2011). These findings, combined with the observation that men with anxiety disorders are less likely to seek help (Roness et al., 2005), might explain the demographic finding that women are more represented in the sample.

A recurring theme among current findings and those of previous studies is that older adults tend to report less severe symptoms, both related to depression and anxiety. Does this mean that older individuals diagnosed with anxiety disorders truly experience less distress than the young- and middle-aged?

One potential reason supporting this case is the accumulation of experiences throughout life. Older patients might have a broader range of life experiences, including exposure to stressors such as similar mental disorders in their past. This may have enabled them to develop adaptations and coping strategies to better manage associated symptoms. In

their paper titled ‘Social and Emotional Aging’, Charles and Carstensen (2010) argued that ageing could be seen as an adaptation to increase resilience and well-being when faced with life stressors. With increased wisdom often accompanying age (Grossmann, 2017), older people may also be selective in what they focus their attention on, prioritising the present moment, meaningful relationships, and positive aspects of their life. This could serve as an adaptive coping strategy to psychological distress (Charles & Carstensen, 2010; Grossmann, 2017), consequently explaining why the elderly might report less severity in various depression- and anxiety symptoms.

The prevalence of being in a relationship tends to be higher among older adults, as also observed in this study where 65%, 50%, and 39% of the early-, mid-, and late-adult groups, respectively, reported being single. This could be another factor explaining the lower severity of symptoms related to anxiety and depression reported by older adults, as being in a relationship is associated with increased social support. Studies have found that lower levels of social support are associated with increased severity of psychiatric disorders, including affective- and anxiety disorders (Cairney et al., 2008). In line with this, Priest (2012) found that individuals with anxiety disorders were more likely to be single, although this association does not prove causation. Nonetheless, the findings highlight the importance of social support and the potential benefits of being in a relationship for individuals with anxiety disorders.

The finding that older adults reported less severe symptoms related to anxiety and depression does not necessarily imply that they experience these disorders less severely. An alternative explanation could be the existence of an undetected population of older individuals with anxiety disorders (Anderson et al., 2017), and among these undetected cases, more severe instances might exist. In their study, Sable and Jeste (2001) argue

that the underdiagnosis of older adults may explain why most studies tend to indicate that anxiety disorders become less prevalent with advancing age. Several potential factors could explain why the underdiagnosis of older adults persists.

One factor might be that older adults with anxiety disorders are less likely to use mental health services than younger generations (Scott et al., 2010). The stigmatisation associated with help-seeking and mental health care may create a discrepancy between older adults experiencing symptoms that fit a disorder diagnosis and those seeking help. Although stigma affects people of all ages, older adults tend to be more influenced by it, reducing their likelihood of seeking treatment or reporting their psychiatric symptoms to their primary care physician (Corrigan, 2004). Therefore, reducing stigma and increasing the utilisation of mental health services among older adults would, in turn, increase the detection rate of disorders among them, possibly uncovering more severe cases.

Another factor might be that as people age, anxiety symptoms become more somatic and less cognitive (Anderson et al., 2017; Bryant et al., 2008; Husain et al., 2005). With the common notion that anxiety disorders are mainly psychological, older individuals might not recognise physical anxiety symptoms as being indicative of an anxiety disorder (Anderson et al., 2017). Bryant et al. (2008) further note that anxiety has the potential to become a sub-threshold disorder in older individuals, resulting in fewer cases of older adults with anxiety disorders but more cases of older adults with symptoms of anxiety. This leads to the possibility that older individuals who are screened might have an anxiety disorder, yet they are not diagnosed as such.

The symptom-measurement instruments themselves could be another potential factor reinforcing this underdiagnosis issue. Both GAD-7 and PHQ-9 ask if the patient has been bothered by a problem for the past two weeks. An older individual might have lived with

the problem for a longer duration of time and, as a result, become more accustomed to it. Consequently, older adults might report their symptoms less severely than early- and mid-adults, contributing to the underdiagnosis of mental disorders.

In addition to underdiagnosis among older adults, underreporting of symptoms may also contribute to the observed differences between age groups. Research has shown that older adults tend to underreport their symptoms, as they do not want to feel like a burden to their healthcare providers (Husain et al., 2005). This reluctance to openly discuss their mental health symptoms might lead to a reduced recognition of the true severity of anxiety and depression among older individuals. Additionally, there is also the possibility that older adults do not accurately identify symptoms related to anxiety and depression (Bryant et al., 2008; Wetherell et al., 2009). Both underreporting and misidentifying the severity of their symptoms could in turn affect the accuracy of comparisons with younger age groups.

An alternative way of stating that older adults may experience less severe symptoms is proposing that early- and mid-adults encounter more pronounced symptoms. An increasing trend observed particularly in younger generations is the need for perfectionism (Curran & Hill, 2019; Robinson et al., 2021). In their exploration of perfectionism and its effects on people over time, Curran and Hill (2019) posited that socially prescribed perfectionism is likely the most important explanation for the increase in mental health issues among younger individuals. When coupled with existing anxiety symptoms, it becomes evident how this could exacerbate the symptomatology. Therefore, younger people may experience anxiety disorders at a more severe level than older adults.

While some symptoms exhibited significant differences across age groups, many others did not, emphasising the importance of examining age-related differences at a more

symptom-focused level. Investigating individuals solely at a broader diagnostic level may leave numerous crucial age-related characteristics undetected, limiting the potential for developing more tailored treatment plans. Disorders exhibit subtle variations, and these can only be fully understood and addressed by delving into the disorders on a deeper, more detailed level. Expanding this understanding is essential, necessitating further research on the role of age in anxiety and depression symptoms. Potential avenues for investigation may include exploring the impact of confounding factors such as socioeconomic differences in symptom presentations and assessing treatment outcomes across various age groups.

3.1 Limitations

Several limitations exist. Given the cross-sectional design of this study, only associations between variables can be established, and causal relationships cannot be assumed. As a result, age should not be expected to cause any changes in the different symptoms based on the data from this study. Furthermore, there may be confounding variables that were not controlled for, potentially creating the observed differences. Possible confounders include socioeconomic status, educational level, or comorbid medical conditions.

As noted in the introduction and discussion, the possibility of sampling bias may influence the observed differences in the present study. The sample consisted solely of individuals who actively sought assistance, which tends to include people more open to engaging in treatment or experiencing more severe symptoms. This might create an overrepresentation of severe cases in the sample, not providing an accurate representation of the general population. Additionally, it is plausible that there are extreme cases in which an individual experiences a symptom to such an overwhelming extent that they either choose not to seek help or are incapable of doing so. This could potentially introduce

confounding factors that distort the data and limit the generalisability of the findings.

The observed demographic trend, where the female-to-male ratio tends to even out across age groups, could present a limitation to the study. By not maintaining an equal ratio for each group, the significant differences observed might, in part, be attributable to gender acting as a confounding variable.

The sample was obtained from existing outpatients in Norway, specifically from one district psychiatric centre. As a result, this sample may not be fully representative of the broader Norwegian clinical population. Furthermore, as mentioned in the discussion, there might be a group of people who meet the criteria for anxiety disorder diagnoses but have not yet been identified by any treatment program. Consequently, the sample may not accurately represent the entire population of people with anxiety disorders.

The data were collected using self-report questionnaires, which could introduce biases. As previously discussed, older adults might underreport or misidentify their own symptoms, leading to data that may not accurately represent their disorder expression. This, in turn, may affect the possible findings reported in this study.

There is no defined standard for what age ranges to divide the age groups in. This study has adopted the same categorisation as Schat et al. (2017), which is based on rough estimations of life phases. However, this division may not always align with other studies exploring similar topics, which could hinder direct comparisons between the current findings and those of other research. Furthermore, the chosen age group divisions may not optimally reflect differences in symptomatology. Symptoms can evolve gradually with age, and the selected cut-off points for age groups might not represent the most effective divisions. To mitigate this limitation, this study also incorporates a linear regression based on age for each symptom, providing additional insight into the relationship between

age and symptomatology.

3.2 Implications

The findings of this study may have several important implications for understanding the role of age in anxiety- and depression symptoms among outpatients with anxiety disorders. These implications are relevant to both clinical practice and policymaking.

From a clinical standpoint, there may be a need to adapt the assessment of anxiety disorders based on age-related factors. Older adults might underreport their actual symptoms, perhaps due to not wanting to be bothersome or misidentifying their symptoms. Additionally, they may experience anxiety disorders more somatically, resulting in more cognitively oriented questionnaires failing to capture the severity of their disorder. Adapting the assessment based on age could lead to a more effective screening.

Clinicians could consider developing tailored treatment plans that address the distinct symptoms expressed by different age groups. Younger generations may experience anxiety disorders more acutely, potentially due to the compounding effect of perfectionism. Introducing coping strategies to address this issue may be beneficial. Moreover, the potential importance of social support might also warrant extra attention. By emphasising the positive impact of social connections and relationships on anxiety and depression symptoms, clinicians could further assist younger adults who may lack solid social support. Given that older adults might experience anxiety disorders more somatically, they could benefit more from treatment focused on relieving somatic symptoms. Tailoring the clinical practice with age-specific interventions to provide for the different needs could result in more effective mental health care.

In addition to clinical implications, this study may also shed light on potential policy

implications. As discussed, there could be a larger group of older adults with symptoms that meet the criteria for an anxiety disorder but have not been diagnosed as such. Implementing policies that address this issue and facilitate the detection of these individuals should be a priority. Stigmatisation associated with mental health and help-seeking often occurs at a societal level, so initiating campaigns to reduce stigma might be beneficial (Henderson et al., 2013). Furthermore, increasing collaboration between physicians and clinicians could help reduce the number of underdiagnosed older adults.

4 Conclusion

This study found that older adults with anxiety disorders tend to report less severe symptoms of irritability, fatigue, poor appetite, and suicidal ideation compared to early- and mid-adults. These symptoms are primarily non-somatic, emphasising the significance of examining age-related variations at the symptom level, rather than the diagnostic level, where such nuances may not be as evident.

The accumulation of life experiences, wisdom, and psychological resilience accompanying the ageing process may render older adults better equipped to confront life stressors, thereby increasing their resilience to severe symptoms. Furthermore, the increased likelihood of having a strong social support network among older adults might contribute to this finding.

Nonetheless, alternative explanations for these findings could also be present. An undetected population of older individuals with more severe anxiety disorders that have not been identified by treatment providers may exist. Older adults might not accurately recognise their symptoms or could underreport them to avoid feeling like a burden to healthcare providers. Moreover, stigmatisation associated with help-seeking and mental

health care, sampling bias, and the possibility that anxiety might become a sub-threshold disorder in older adults, could contribute to this issue.

Further research is needed to enhance the understanding of age's role in anxiety- and depression symptoms, as well as to develop appropriate interventions and support systems for individuals with anxiety disorders throughout their lifespan.

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