

**COMMON MENTAL DISORDERS IN VISUAL ARTISTS
IN SOUTH AFRICA: OCCURRENCE OF SYMPTOMS
AND ASSOCIATED FACTORS**

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The authors declare that there are no conflicts of interest.

Declaration

I, Alicia Tamahny Swart, hereby declare that this research is of my own, unaided work. I am submitting this research report for the degree Master of Medicine in Psychiatry (in submissible format with my protocol) in the branch of Psychiatry at the University of the Witwatersrand, Johannesburg. This research report has not been submitted before for any degree or examination at this or any other university.

A handwritten signature in cursive script, appearing to read 'AT Swart', is written over a horizontal dashed line.

AT Swart

(signature of candidate)

20-06-2023

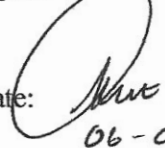
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Contribution Of The Candidate To The Paper

Declaration: Student's contribution to article(s) and agreement of co-author(s)

I, Alicia Tamahny Swart, student number 364261, declare that this Research Report is my own work and that I have contributed significantly towards the research finding presented in the paper intended for publication below.

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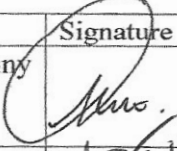
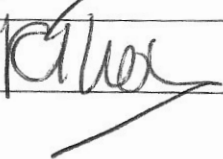
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Article Title: Common mental disorders in visual artists in South Africa: Occurrence of symptoms and associated factors

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Dedication

I dedicate this research report to my late father, Nicolaas Jacobus Swart, whose belief in me never wavered and continues to inspire.

Acknowledgements

I would like to thank my supervisor, Professor Rita Thom, for her support, guidance and advice throughout this research project.

I extend gratitude to the directors of the Visual Arts Network of South Africa, without whom this research would not have been possible. I would also like to thank each member of the Visual Arts Network who took the time to complete the survey. I hope that this research will promote better mental health support to members of the visual arts community.

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Abstract:

Background: Studies have reported an association between mental illness and creativity. However, there are no studies of the prevalence of common mental disorders (depressive, anxiety and substance use disorders) in visual artists in low- and middle-income countries, including South Africa.

Aim: To determine the occurrence of symptoms of common mental disorders (CMD) amongst visual artists in South Africa, to compare this with findings in the general population, and to explore associations with various demographic factors.

Setting: Online survey completed by 231 members of VANSAs (Visual Arts Network of South Africa)

Methods: A cross-sectional observational study screening for the occurrence of symptoms of CMD using the SAMISS questionnaire.

Results: A positive screen for a possible CMD was found in 87% and a positive screen for a possible substance use disorder in 64%. Gender (female) and monthly income(<R10,000) were significantly associated with a positive screen for a common mental disorder. No other socio-demographic or COVID-19 related variables were significantly associated with the occurrence of symptoms of a CMD. No significant associations between socio-demographic or COVID-19 related variables were found with the occurrence of symptoms of a substance use disorder.

Conclusion: A high occurrence of symptoms of CMD (87%) and substance use disorders (64%) exists in a sample of VANSAs members with a significant association between female gender and lower income level (<R10 000) and symptoms of CMD.

Contributions: Findings suggest that further research is warranted and highlights the need to strengthen mental health support by increasing government funding of organizations such as VANSAs.

Introduction

Various studies report a link between creativity and mental illness. However, they are hampered by methodological difficulties, lack of standardized definitions of creativity and mental illness, diverse populations and disparate designs [1]. One cannot view these studies as “cumulative evidence”, regardless of similar results [2]. Studies can be divided into those that examine psychopathology in established creative individuals, and those that determine the creativity of individuals with known psychopathology [3]. To avoid bias that may result from the effects of mental illness, the latter group may include studies of relatives of individuals with mental illness [3,4,5].

Nancy Andreasen compared a group of 30 writers with matched controls [6]. 80% of writers reported an episode of affective illness, versus 30% of controls. In her 1989 study of 47 influential British artists and playwrights, Kay Jamison found that 38% had been treated for an affective illness [7]. Arnold Ludwig reviewed the biographical details of 1005 individuals in creative and non-creative professions [8] and found that visual artists, specifically, were more likely to suffer from depression and anxiety than non-creative controls. A 1996 study of 291 ‘world-famous’ men, revealed that 41,7 % of artists suffered from a depressive condition, and 8,3% suffered from anxiety [9]. These studies relied heavily on self-report, retrospective analysis, and authors’ personal interpretations. Participants were predominantly male and Caucasian and therefore not easily generalizable.

A large-scale case-control Swedish study which examined the creativity of individuals with known psychopathology and their relatives found that creative professions were more common in the 300 000 individuals with Bipolar Disorder or Schizophrenia and their relatives than in the general population [3].

Reviewing literature pertaining to visual artists, a 1949 study of 294 German-born “artistic and scientific geniuses”, found a higher prevalence of psychosis and psychoneurosis amongst the sample group than in the average population [10]. A University of Hungary study which made use of the Basic Symptoms Inventory (BSI), compared 182 art students to 704 controls, and found that art students scored higher on psychoticism, hostility and phobic anxiety [11]. Two UK-based studies supported this association [12,13].

A 2016 systematic review found that substance use is more common in creative individuals [14]. A University of Athens study compared substance use amongst 57 artists (including visual artists) compared to 61 non-artist controls and found that the use of substances was significantly higher in artists [15]. Preti and Velante found substance use in a group of 80 Italian art students (musicians, painters and writers) to be consistently higher than in 80 matched controls [16]. Iszaj et al found that being an art student may be a risk factor for early onset of substance use and that art students used a wider array of substances and more frequently than non-art controls [11]. Knafo postulates that artists may use substances to evolve to a heightened perceptual state [17].

Common mental disorders are defined as depressive, anxiety and substance use disorders. There are no published studies of the prevalence of common mental disorders in visual artists in low- and middle-income countries. The South African Stress and Health (SASH) study established the 12-month prevalence of common mental disorders amongst the general population to be 17% [18], but no literature could be found regarding the prevalence of mental illness in visual artists in South Africa.

The Visual Arts Network of South Africa (VANSA) supports art practice by decentralising art resources, supporting already-existing initiatives, developing learning platforms and providing opportunities for education [19]. The researchers were contacted by VANSA, who had noted anecdotally a high percentage

of its members appeared to be affected by mental health difficulties, and requested research to confirm this observation, to facilitate the development and government funding of mental health initiatives.

Various screening tools for common mental disorders and substance use disorders exist including the Self Reporting Questionnaire (SRQ-20), the General Health Questionnaire (GHQ-12), Patient Health Questionnaire (PHQ-9) and the Substance Abuse and Mental Illness Symptom Screener (SAMISS). The SAMISS was developed in 2005 as a screening tool for symptoms of mental illness and substance abuse in people living with HIV [20]. The substance use section comprises questions from the Alcohol Use Disorders Identification Test, the Two Item Conjoint Screen for Alcohol and Other Drug Problems, one question around the use of illicit drugs such as heroin, and one question about prescription drug abuse.

Despite methodological challenges and non-standardized definitions of creativity, the overall positive association between creativity and psychopathology warrants further investigation. This is supported by the dearth of South African literature, anecdotal evidence of distress experienced by visual artists, high prevalence of mental disorders among the general population, as well as the suspected vulnerability of visual artists to these disorders.

Aim and Objectives:

This study aimed to determine the occurrence of symptoms of common mental disorders amongst visual artists in South Africa.

The study objectives were as follows:

- To describe the demographic profile of a convenience sample of members of the Visual Arts Network of South Africa (hereafter referred to as VANSa)
- To determine the occurrence of symptoms of common mental disorders (depressive, anxiety and substance use disorders) in this sample using the Substance Abuse and Mental Illness Symptom Screener (SAMISS), and to compare these with existing studies of these disorders in the general South African population
- To explore associations between symptoms of mental disorders and various demographic factors

Research methods and design

Study Setting

This was an online survey distributed to members of VANSa via Survey Monkey.

Study Design

This was a cross-sectional observational study screening for the occurrence of symptoms of common mental disorders.

Study population and sampling strategy

The study population was a convenience sample of the membership of VANSa. The survey was designed on Survey Monkey and forwarded to all the approximately, 7000 members on the VANSa emailing list. A minimum sample size of 132 was required for statistical significance. The sample size was calculated using the formula: $n = Z^2 * P(1-P) / d^2$, where n = sample size, Z = Z statistic for a level of confidence (1.96 for 95% confidence level), P = Expected prevalence or proportion and d = Precision. Based on a prevalence of 17% of common mental disorders amongst the general population in the literature [18], a minimum sample

size of 216 would be adequate at a precision of 10%. The final sample size was 231. Inclusion criteria were that participants were members of VANSAs aged 18 years and above with sufficient English proficiency to participate.

Data Collection Tools

A range of screening tools was discussed with the VANSAs coordinators, including the Self-Reporting Questionnaire (SRQ-20) and Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST). The coordinators felt that the detailed nature of the ASSIST would discourage respondents from completing the survey as they may experience the questions as intrusive. It was agreed that the most suitable screening tool would be the SAMISS, based on its ease of self-administration, short completion time, suitability for online administration and its ability to screen for symptoms of mental illness as well as substance use disorders. We opted against the use of the Composite International Diagnostic Interview (CIDI), utilized by the SASH study, as this tool is interviewer-administered, lengthy, and covers both common and severe mental illnesses. The mental illness section of the SAMISS comprises questions from the CIDI, increasing the reliability of a comparison drawn between our findings and the prevalence of mental illness in the South African population as a whole.

The original study which validated the SAMISS was conducted at the University of Carolina using the Structured Clinical Interview for DSM (SCID) [21]. A cross-sectional study at 2 primary health care clinics in Cape Town, found that when compared to the Mini International Neuropsychiatric Interview (MINI), the SAMISS had a high sensitivity and moderate specificity of 94 % and 58 % respectively [22]. Using a ROC analysis, the specificity could be increased, and the sensitivity only slightly altered if the cut-off for a positive screen for mental illness component (questions 8-16) was increased (see Figure 1). A cut-off of 3 was found to have the best predictive value and was therefore used in our study.

The SAMISS exists in a 16-item and 13-item format. For the purposes of this research, the 16-item format was utilized. As this study examines the occurrence of *common* mental disorders, and not the so-called *severe* mental disorders, questions 8 and 15 were omitted, which deal with a manic episode of Bipolar I Disorder and Post-Traumatic Stress Disorder respectively. There is no published literature where the SAMISS has been used in populations not previously determined to be HIV positive.

Demographic variables were collected to determine a correlation between them and the occurrence of symptoms of common mental disorders. The variables were:

- Age
- Province in which artist resides
- Number of dependents
- Relationship status
- Education level
- Percentage of income derived from any artistic occupation
- Presence of any significant current physical illnesses
- Income level (in ZAR)
- Time spent within the visual arts sector
- Role in the visual arts sector and
- Description of current employment

A question regarding how respondents would have answered differently prior to the COVID-19 pandemic and subsequent lockdowns was included. The options were 'slightly different', 'very different', or 'identical'.

The survey consisted of an introduction by VANSAs, and an information page. By selecting “ok” the participant provided informed consent for anonymous participation. Subsequent questions pertained to demographic variables, symptoms of substance use and common mental disorders. Participants were provided with contact details of emergency services, such as the South African Depression and Anxiety Group, and a suicide crisis line for any respondents requiring urgent psychiatric assistance.

Data analysis

Data was collected over a period of 3 months (July 2021 – September 2021) and exported from Survey Monkey to Excel. Statistical analyses were conducted in R software (version 4.0.0; www.R-project.org). Data sets were assessed for departure from normality using the Shapiro–Wilk test.

Socio-demographic variables were analyzed using Pearson’s chi-squared good of fitness tests to assess whether the distribution of counts deviated from a null model. To determine the occurrence of symptoms of common mental disorders, the percentage of respondents who screened positive for symptoms of common mental disorders and the 95% confidence intervals (using a Poisson distribution) were calculated. To determine the occurrence of symptoms of a possible substance use disorder, the percentage of respondents who screened positive for symptoms of substance use disorders and the 95% confidence intervals (using a Poisson distribution) were calculated. To analyze the relationship between socio-demographic and COVID-19 related variables versus a positive screen for symptoms of a possible common mental disorder or substance use disorder, Pearson’s chi-squared tests for independence (with Yates’ correction, as appropriate) were used to analyze whether these categorical variables between respondents deviated by chance (i.e., a null model). Welch’s t-tests were used to analyze variation of continuous data for symptoms of common mental and substance use disorders separately.

Table 5 Sensitivity, specificity, positive and negative likelihood ratios (LR) for the mental illness component of the SAMISS

Cut-point	Sensitivity (%)	Specificity (%)	Correctly classified (%)	LR+	LR–
(≥0)	100.0	0.0	16.6	1.00	
(≥1)	96.6	59.9	66.0	2.41	0.06
(≥2)	84.5	79.5	80.3	4.11	0.20
(≥3)	55.2	92.1	86.0	7.00	0.49
(≥4)	36.2	95.6	85.7	8.13	0.67
(≥5)	20.7	97.3	84.6	7.55	0.82
(≥6)	15.5	99.0	85.1	15.10	0.85
(≥7)	8.6	99.7	84.6	25.17	0.92
(≥8)	1.7	100.0	83.7	0.98	
(>8)	0.0	100.0	83.4	1.00	

Fig 1- Table denoting sensitivity, specificity, positive and negative likelihood ratios (LR) for the mental illness component of the SAMISS [22]

Ethical Considerations

Permission was obtained from the director of VANSAs, and ethical approval was obtained from the Human Research Ethics Committee (medical) – clearance number M201032.

Results:

Objective 1:

The mean (SD) age of the respondents was 34.1 (9.4) years. The majority were female, residing in Gauteng, with no dependents, a tertiary qualification, no chronic illnesses, in a relationship, and generating 75 - 100% of their income from their artistic occupation. Most had monthly incomes of less than R 10 000, had previously worked in an art gallery/museum, had not completed an artistic residency, had more than 10 years' experience in the industry and were employed as freelancers/self-employed (see Table 1)

Table 1 – Sociodemographic Characteristics of 231 members of the Visual Arts Network of South Africa

Variable	Count	Percentage of Sample
Gender		
Female	145	62.8%
Male	70	30.3%
Non-binary	16	6.9%
Province of residence		
Eastern Cape	8	3.5%
Free State	11	4.8%
Gauteng	131	56.7%
Kwazulu-Natal	21	9.1%
Limpopo	4	1.7%
Mpumalanga	6	2.6%
North-West	1	0.4%
Northern Cape	2	0.9%
Western Cape	45	19.5%
Not currently based in South Africa	2	0.9%
Dependents		
1-2	76	33.0%
3-4	41	17.8%
More than 4	11	4.8%
None	102	44.3%
Highest education level		

Secondary Schooling	29	12.6%
Tertiary Qualification	202	87.4%
Chronic illness		
Yes	48	20.9%
No	182	79.1%
Relationship status		
In a relationship/married	121	52.8%
Other	6	2.6%
Single	95	41.5%
Widowed	1	0.4%
Divorced/Separated	6	2.6%
Percentage income derived from artistic occupation		
<25%	77	33.6%
25-50%	19	8.3%
50-75%	20	8.7%
75-100%	113	49.3%
Role in the visual arts sector		
Academic	21	9.1%
Arts administrator/manager	31	13.4%
Curator	26	11.3%
Other	33	14.3%
Student	14	6.1%
Technical support	3	1.3%
Visual artist	103	44.6%
Monthly income		
<R10 000	105	47.1%
R10 000 - R20 000	60	26.9%
R20 000- R30 000	26	11.7%
>R30 000	32	14.3%

Previously worked in a gallery/museum		
Yes	147	63.6%
No	84	36.4%
Previously been an artist in residency		
Yes	75	32.5%
No	156	67.5%
Years in the visual arts sector		
<1 year	10	4.3%
1 - 5 years	64	27.7%
5-10 years	71	30.7%
>10 years	86	37.2%
Current employment		
Employed outside of the arts sector to sustain my artistic career	41	17.8%
Entrepreneur within the arts sector	27	11.7%
Freelancer within the arts sector	58	25.2%
Permanently employed within the arts sector	48	20.9%
Self-employed within the arts sector	56	24.3%
To what extent do you feel your responses would have been different prior to the effects of the COVID-19 pandemic and subsequent lockdowns?		
My responses would have been very different	54	23.4%
My responses would have been slightly different	106	45.9%
My responses would have been the same	71	30.7%

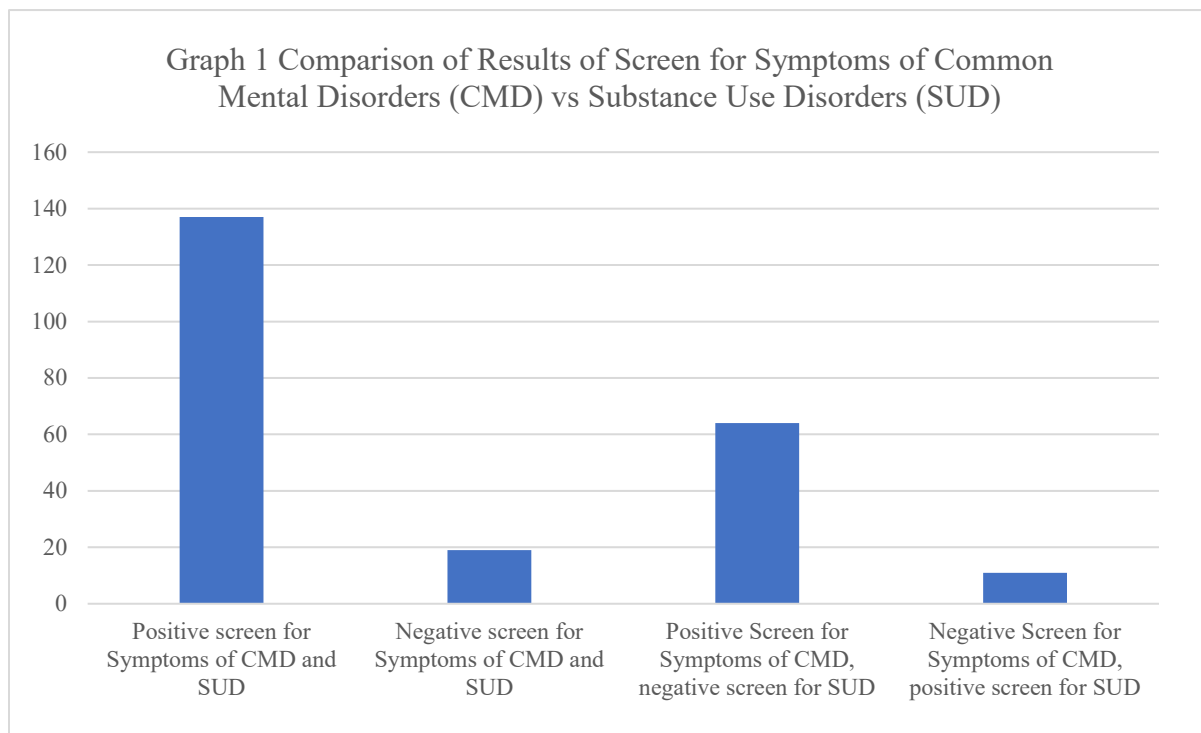
Objective 2:

A positive screen for a possible Common Mental Disorder (depression or anxiety) was found in 87% of the sample (with 75.6% and 99.2% lower and upper 95% confidence intervals respectively).

Objective 3:

A positive screen for a possible substance use disorder was found in 64% of the sample (with 54.4% and 74.6% lower and upper 95% confidence intervals respectively).

A comparison was made between respondents who screened positive or negative for symptoms of common mental disorders and those who screened positive or negative for substance use disorders. It was found that a statistically significant correlation exists between screening positive for symptoms of common mental disorders and positive for symptoms of substance use disorders ($\chi^2 = 172.60$, $df = 3$, $p < 0.001$). Most of the respondents, $n = 137$ (59.3%), screened positive for symptoms on both tests. Of the remainder, $n = 19$ (8.3%) screened negative for symptoms on both tests, $n = 64$ (27.7%) screened positive for symptoms of a common mental disorder and negative for symptoms of a substance use disorder and $n = 11$ (4.7%) screened negative for symptoms of a common mental disorder and positive for symptoms of a substance use disorder (see Graph 1)



Objective 4:

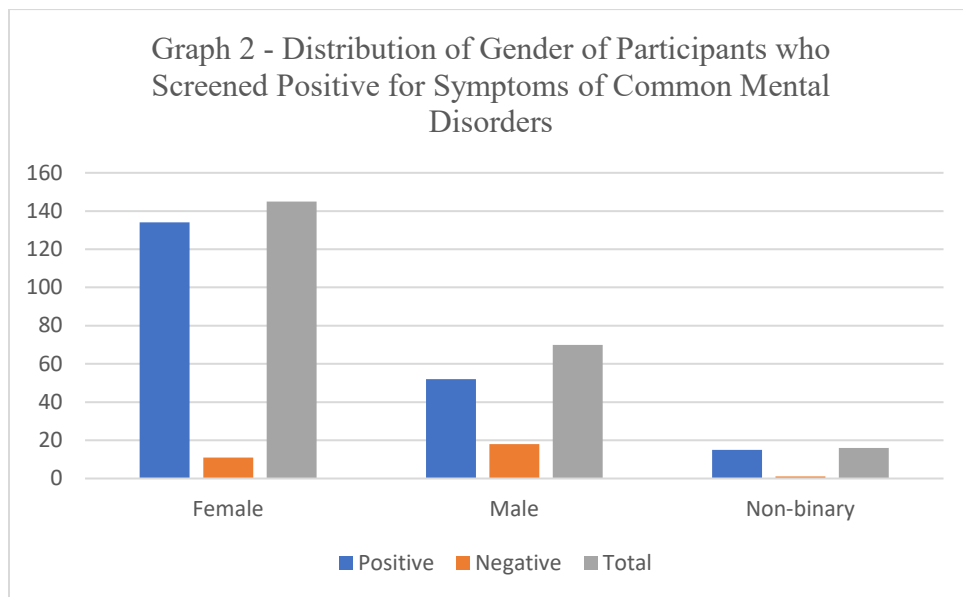
Gender was significantly associated with a positive screen for symptoms of common mental disorders (Table 2, Graph 2). A greater percentage of females screened positive for symptoms of common mental disorders, and a greater percentage of males screened negative for these symptoms. Monthly income was also significantly associated with the occurrence of symptoms of a common mental disorder: a greater percentage of respondents earning under R 10 000 per month screened positive for these symptoms (Table 2, Graph 3). None of the other socio-demographic and COVID-19 related variables were significant predictors of the occurrence of symptoms of a common mental disorder.

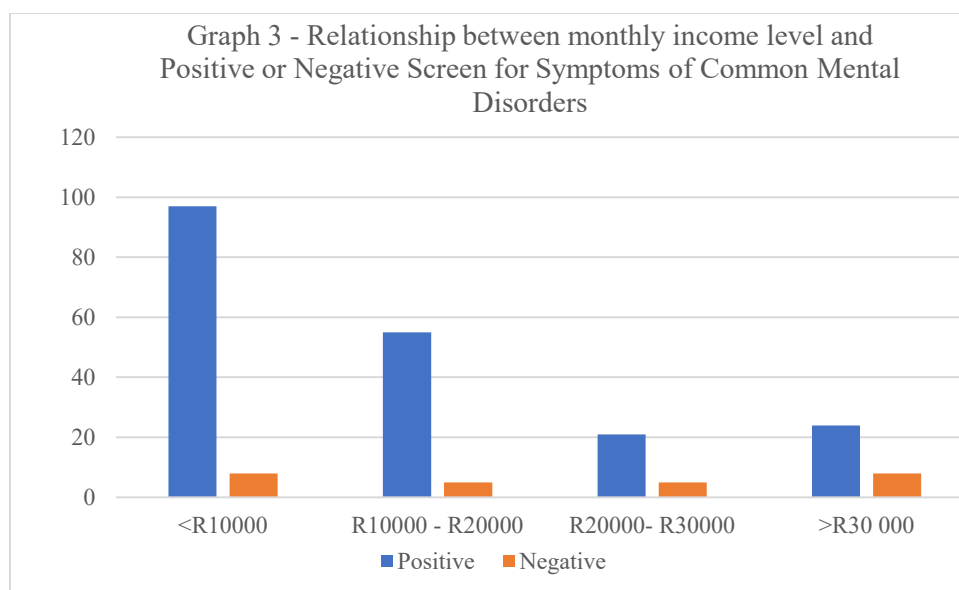
Table 2. The relationship between socio-demographic and COVID-19 related variables and outcome of screening test for symptoms of common mental disorders.

Variable	Positive (n = 201)	Negative (n = 30)	P-values
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Age (years)	34.0 (SD = 9.4)	35.7 (SD = 10.3)	p = 0.408
Gender			p = 0.001
Female	134 (66.7%)	11 (36.7%)	
Male	52 (25.9%)	18 (60.0%)	
Non-binary	15 (7.4%)	1 (3.3%)	
Dependents			p = 0.069
1-2	65 (32.5%)	11 (36.7%)	
3-4	35 (17.5%)	6 (20.0%)	
More than 4	7 (3.5%)	4 (13.3%)	
None	93 (46.5%)	9 (30.0%)	
Highest education level			p = 0.455
Secondary Schooling	27 (13.4%)	2 (6.7%)	
Tertiary Qualification	174 (86.6%)	28 (93.3%)	
Chronic illness			p = 0.714
Yes	43 (21.5%)	5 (16.7%)	
No	157 (78.5%)	25 (83.3%)	
Relationship status			p = 0.145
In a relationship/married	110 (54.7%)	11 (36.7%)	
Not in a relationship	85 (42.3%)	17 (56.7%)	
Other	6 (3.0%)	2 (6.7%)	
Percentage income derived from artistic occupation			p = 0.623
<25%	65 (32.5%)	12 (41.4%)	
25-50%	17 (8.5%)	2 (6.9%)	
50-75%	19 (9.5%)	1 (3.4%)	
75-100%	99 (49.5%)	14 (48.3%)	
Monthly income			p = 0.026
<R10 000	97 (49.2%)	8 (30.8%)	
R10 000 - R20 000	55 (27.9%)	5 (19.2%)	
R20 000- R30 000	21 (10.7%)	5 (19.2%)	
>R30 000	24 (12.2%)	8 (30.8%)	
Years in the visual arts sector			p = 0.723
<1 year	9 (4.5%)	1 (3.3%)	
1 - 5 years	54 (26.9%)	10 (33.3%)	
5-10 years	64 (31.8%)	7 (23.4%)	
>10 years	74 (36.8%)	12 (40.0%)	
Current employment			p = 0.965
Employed outside of the arts sector to sustain my artistic career	35 (17.5%)	6 (20.0%)	
Entrepreneur within the arts sector	23 (11.5%)	4 (13.3%)	
Freelancer within the arts sector	51 (25.5%)	7 (23.3%)	

Permanently employed within the arts sector	43 (21.5%)	5 (16.7%)	
Self-employed within the arts sector	48 (24.0%)	8 (26.7%)	
Effects of the COVID-19-19 pandemic and subsequent lockdowns?			p = 0.126
My responses would have been very different	95 (37.2%)	11 (36.7%)	
My responses would have been slightly different	49 (24.4)	5 (16.7%)	
My responses would have been the same	57 (28.4%)	14 (46.6%)	





None of the socio-demographic and COVID-19-related variables were significant predictors of screening positive or negative for the occurrence of symptoms of a substance use disorder (Table 3).

Table 3. The relationship between socio-demographic and COVID-19 related variables and outcome of screening test for symptoms of substance use disorders

Variable	Positive (n = 148)	Negative (n = 83)	P-Values
Age (years)	33.8 (SD = 9.0)	35.0 (SD = 10.2)	p = 0.343
Gender			p = 0.674
Female	95 (64.20%)	50 (80.2%)	
Male	42 (28.4%)	28 (33.7%)	
Non-binary	11 (7.4%)	5 (6.1%)	
Dependents			p = 0.275
1-2	50 (34.0%)	26 (31.3%)	
3-4	26 (17.7%)	15 (18.1%)	
More than 4	4 (2.7%)	7 (8.4%)	
None	67 (45.6%)	35 (42.2%)	
Highest education level			p = 0.655
Secondary Schooling	17 (11.5%)	12 (14.5%)	
Tertiary Qualification	131 (88.5%)	71 (85.5%)	
Chronic illness			p = 0.836
Yes	116 (78.4%)	66 (80.5%)	
No	32 (21.6%)	16 (19.5%)	
Relationship status			p = 0.573
In a relationship/married	80 (54.1%)	41 (49.4%)	
Not in a relationship	62 (41.8%)	40 (48.2%)	

Other	6 (4.1%)	2 (2.4%)	
Percentage income derived from artistic occupation			p = 0.741
<25%	47 (32.2%)	30 (36.2%)	
25-50%	11 (7.5%)	8 (9.6%)	
50-75%	12 (8.2%)	8 (9.6%)	
75-100%	76 (52.1%)	37 (44.6%)	
Monthly income			p = 0.781
<R10 000	67 (46.5%)	38 (48.1%)	
R10 000 - R20 000	37 (25.7%)	23 (29.1%)	
R20 000- R30 000	19 (13.2%)	7 (8.9%)	
>R30 000	21 (14.6%)	11 (13.9%)	
Years in the visual arts sector			p = 0.723
<1 year	6 (4.1%)	4 (4.8%)	
1 - 5 years	39 (26.4%)	25 (30.1%)	
5-10 years	49 (33.1%)	22 (26.5%)	
>10 years	54 (36.4%)	32 (38.6%)	
Current employment			p = 0.194
Employed outside of the arts sector to sustain my artistic career	28 (18.9%)	13 (15.9%)	
Entrepreneur within the arts sector	15 (10.1%)	12 (14.6%)	
Freelancer within the arts sector	33 (22.3%)	25 (30.5%)	
Permanently employed within the arts sector	37 (25.0%)	11 (13.4%)	
Self-employed within the arts sector	35 (23.7%)	21 (25.6%)	
Effects of the COVID-19-19 pandemic and subsequent lockdowns?			p = 0.986
My responses would have been very different	35 (23.7%)	19 (22.9%)	
My responses would have been slightly different	68 (45.9%)	38 (45.8%)	
My responses would have been the same	45 (30.4%)	26 (31.3%)	

Discussion

Key Findings

The study found a high occurrence of symptoms of common mental disorders and substance use disorders amongst a sample of visual artists in South Africa (87% and 64% respectively). A significant correlation existed between a positive screen for symptoms of common mental disorders and a positive screen for symptoms of substance use disorders. Demographics significantly associated with a positive screen for symptoms of common mental disorders were gender (female) and monthly income <R10000. No significant associations between demographic variables and a positive screen for symptoms of substance use were found. Most respondents indicated that their responses would have been slightly different prior to the COVID-19-19 pandemic.

Objective 1

Compared to the female predominance of 51% in the South African population, [23], this study had a larger majority of 62,8% female participants. Most participants were from Gauteng (with the highest population density in South Africa [23]). The mean age of participants was 34,1, compared to the 20-29 years into which most South Africans (above the age of 18 years) fall [23]. The vast majority of South Africans (81,5%) have a primary school education [23], compared to the participants in this study who predominantly had a tertiary qualification (this is most likely because participants, all members of VANSAs, obtained a qualification in visual arts to pursue a career in this sector). The average monthly income of employed South Africans was estimated at R23 502 in March 2022 [23]. Most participants fell into the income range of >R10 000 per month (52.9%). It is difficult to generalize the socioeconomic status of the selected sample to the population of South Africa as a whole, due to the vast inequities that exist within South African society.

Our sample was compared to those of other South African studies that made use of the SAMISS. A study by Breuer et al consisted of mostly female participants between 30-39 years who were HIV seropositive [24]. However, most were unemployed and had a secondary (not tertiary) level of education. This was a community sample, whereas this study population consisted of people working within the visual arts sector (more likely to be employed and to have possibly studied visual arts at a tertiary level). The original validation study of the SAMISS in the USA consisted of participants between the ages of 30-39 [21]. Most participants were male, had a high school diploma, and were classified as ‘unable to work’. Again, this study drew from a community sample of people living with HIV who were attending a local clinic. The HIV status of our study population was unknown.

Objective 2

There exists a broadly held notion of a link between creativity and psychopathology, but empirical evidence is limited and subject to methodological flaws [25]. Despite increasing the cut-off score for the mental illness component, the occurrence of symptoms of common mental disorders as detected by the SAMISS (87%) remains high. Reasons could be the SAMISS’s poor specificity and case over detection [22], as well as lack of validation of the SAMISS in a population with undetermined HIV status.

Only 30% of respondents reported that their answers would have been identical prior to the COVID-19 pandemic and lockdowns. In lower- and middle-income countries, these events increased general psychological distress [26]. Additionally, the economic and social effects of lockdown measures in countries with high unemployment rates and in which most of the population works within the informal sector (such as South Africa) [27], would have significantly affected visual artists.

No studies in visual artists utilizing the SAMISS could be retrieved. However, studies investigating psychopathology in visual artists that utilized other data collection tools revealed a positive association [10,11,12]. Risk factors which may contribute to this include heightened emotional sensitivity, increased substance use [10], financial circumstances and the stress associated with rejection of creative products [28].

Comparing our findings to other studies utilizing the SAMISS yields mixed results. Its original North Carolina-based validation study found that 69,2% of 148 participants screened positive for symptoms of mental illness [20]. The participants were exclusively HIV positive, and the study was conducted in a first world country, making a direct comparison difficult. The combined occurrence of symptoms of both common mental disorders and substance use disorders in our study was 59,3%, compared to their 21% [20]. Possible reasons for the higher occurrence of symptoms in our study may include the unstudied sensitivity and specificity of the SAMISS in a population with unknown HIV status, recruitment bias (study

participants who opted in knew that the survey was about mental health difficulties, and the high background prevalence of common mental disorders and substance use disorders and increased socio-economic difficulties in South Africa. Despite these factors, it must however be considered that the higher occurrence of symptoms may be due to the participants' visual artistic occupation.

The most comparable study was performed at a Cape Town clinic [24] and found that using the SAMISS, of 269 HIV positive patients on HAART, 43% screened positive for symptoms of a common mental disorder. Their sample is comparable to our sample as the respondents resided in South Africa, most were female and between the ages of 30 – 39. However, most were unemployed and had a secondary level education and were living with HIV. One would expect the sample group with higher unemployment, a lower education level and a serious medical illness to have an increased prevalence of symptoms of mental illness. Therefore, the higher positive screen of symptoms of mental illness in our study (87%) suggests that members of VANSa may indeed be at high risk of having a common mental disorder, despite possible recruitment bias in our study (prospective participants who received the email from VANSa chose to participate with the knowledge that the survey pertained to mental health difficulties). A factor that could have lowered prevalence of symptoms of common mental disorders in the Cape Town study could be that participants in this study were taking HAART for at least 6 months and one would expect their viral loads to have been partially or fully suppressed, reducing symptom burden. It is also not clear if these patients were taking psychotropic medication at the time of the study.

Objective 3

The high occurrence of symptoms of substance use disorders of 64% is consistent with findings of international studies. The association between substance use and creativity has been explored in biographical landmark studies of creative individuals and reported through systematic review [6,8,14].

The most directly comparable study population is found in the University of Hungary study [11]. Structured questionnaires were administered to 130 art students and 698 controls [11]. Researchers found that being an art student might be a risk factor for early onset of substance use and number of different types of substances used. However, because this study focused on younger artists (students) confounding may be present – those using substances are more likely to study visual arts or those using substances prior to tertiary education may have lower university entrance marks, restricting their degree choice. Another limitation is the reliance on self-report and self-selection bias. Its first world setting limits its generalizability.

The original validation study of the SAMISS found a screening prevalence of symptoms of substance use disorders of 37.2% [21]. The sensitivity and specificity of the substance use disorders component of the SAMISS has been shown to be superior to the mental illness part, but its lack of validation in a mixed HIV population brings the accurate detection of cases into question [20]. The sample population of a study based at a primary health care clinic in Cape Town which found an occurrence of symptoms of substance use disorders of 20% is comparable to our study in that participants were also based in South Africa, predominantly female and aged between 30-39. A larger number of participants however were unemployed and did not have a tertiary education. Unemployment results in higher rates of substance use [27]. Since our study had lower unemployment rates, higher occurrence of symptoms of substance use disorders may therefore be related to the visual artistic occupation.

Objective 4

There is limited information regarding the prevalence of common mental disorders in South Africa. Fewer than 10% of those needing mental health intervention eventually access it [29]. The South African Stress and Health Survey made use of the Composite International Diagnostic Interview [18], a gold standard diagnostic test for DSM-IV disorders, in contrast to our study, which screened for the occurrence of symptoms of common mental disorders. Despite this, the findings of the SASH study remain useful as they reflect general trends within South Africa's population. The SASH study found female gender to be associated with increased prevalence of mood and anxiety disorders [18], consistent with our finding that gender is a significant predictor of a positive screen for symptoms of common mental disorder. The World Health Organization's report on gender in mental health research found that women are more likely to suffer from common mental disorders than men [30]. South African studies have found a preponderance of female mental health users [31,32]. Reasons include risk factors for poor mental health, which are also more likely to occur in women, such as poor socio-economic circumstances, intimate partner violence and exposure to men with substance abuse problems [33].

The SASH study found that higher income was associated with increased prevalence of common mental disorders, whereas our study reflects an association with lower income (<R10 000 monthly). Households with lower incomes are more likely to be subject to food insecurity or food insufficiency [34]. A significant association exists between food insufficiency and having a lifetime diagnosis of an anxiety disorder [34]. Thus, lower income may result in increased prevalence of mental disorders due to possible nutritional consequences of food insufficiency, and increased psychological distress caused by financial strain [34]. Attention must also be paid to the possibility of the presence of common mental disorders resulting in decreased income [35].

No demographic variables related significantly to higher occurrence of symptoms of substance use disorders in this study, which contrasts to most studies which have found a significant association with male gender [36]. Demographic variables typically related to higher substance use among artists include male gender and younger age [15].

Strengths and Limitations

The major limitation is that the SAMISS tool has not yet been validated in a general population sample with unknown HIV status. The high sensitivity and only moderate specificity of the SAMISS tool, may overestimate the occurrence of symptoms of both common mental disorders and substance use disorders. Ideally, a diagnostic tool should be administered to participants who screen positive on the SAMISS or any other screening tool in order to establish the prevalence of disorders, not only the occurrence of symptoms. However, the SAMISS's high sensitivity makes it a useful and universal first-line screening tool [22]. Another limitation is that the data collection was online and self-administered and therefore subject to respondent interpretation of questions, which affects the validity of results.

Conclusion

There is a high occurrence of symptoms of common mental disorders (87%) and substance use disorders (64%) in a sample of members belonging to the Visual Artists Network of South Africa with a significant association between female gender and lower income level (<R10 000) and symptoms of common mental disorders.

Implications and Recommendations

No research has been conducted into common mental disorders or substance use disorders in South African visual artists and this study is the first of its kind. Our findings suggest that further research is warranted. It also highlights the need to strengthen access to mental health support by increasing government funding of organizations such as VANSAs.

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Competing Interests

The authors declare that there are no financial or personal relationships that may have inappropriately influenced them in compiling this research.

Authors' Contributions

All authors contributed to the research design. A.S. and R.T. conceptualized and developed the first draft, collected and analyzed data and interpreted results. All authors reviewed, revised and approved the final draft.

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Data Availability

The relevant data is available from the corresponding author, A.S. on reasonable request.

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**Protocol: Common Mental Disorders In Visual
Artists In South Africa: Occurrence Of Symptoms And
Associated Factors**

10 June 2020

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COMMON MENTAL DISORDERS IN VISUAL ARTISTS IN SOUTH AFRICA: OCCURRENCE OF SYMPTOMS AND ASSOCIATED FACTORS

INTRODUCTION

There exists a stereotypical association between mental illness and creativity that dates to Ancient Greece when Plato described creativity as ‘divine madness’ and Aristotle described creative individuals as ‘melancholy’ of temperament. Throughout history, and especially during the Romantic period, is evidence of the belief that mental affliction enhances artistic creativity. Lord Byron himself once famously commented, “We of the craft are all crazy. Some are affected by gaiety, others by melancholy, but all are more or less touched”, (as cited by Adrienne Sussman in the *Stanford Journal of Neuroscience*) [1]. Dotted throughout history are prominent examples— Vincent van Gogh, Edvard Munch, American artist Georgia O’Keefe, and Swiss artist Adolf Wolfli. The notion of the ‘tortured artist’ remains popular today. Various studies have attempted to prove this correlation, including biographical studies of creative individuals, studies of families, studies of the creativity of psychiatric patients and psychometric assessment of so-called ‘creative’ individuals.

Artists throughout history have also struggled with social and financial difficulties, and often lead a precarious existence. There is the perception that artists use substances to enhance creativity and as a coping mechanism due to difficult life circumstances. It is thought that this is no different in South Africa.

Although there appears to be some evidence of an increased prevalence of symptoms of all mental disorders in artists, this study will focus on symptoms of common mental disorders (depressive,

anxiety and substance use disorders) as per the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders. Serious mental disorders will not be included in order to narrow the focus of the research and to yield more specific results.

LITERATURE REVIEW

The link between creativity and mental illness – a broad perspective

Although the focus of this research is on common mental disorders specifically, there exists in the literature a perceived association between creativity and general psychopathology that should not be overlooked. In 1987, a landmark study by Nancy Andreasen found that 80% of a sample group of writers fulfilled the criteria for Bipolar Disorder, compared to only 30 % of non-writers [2]. Andreasen's study was significantly flawed by spectator bias and a sample size of only 30 writers (mostly male and Caucasian). In 1989, Kay Jamison conducted another study which involved 47 poets, playwrights, novelists, biographers, and visual artists. She found that 38% of the study population had sought treatment for mental illness [3]. This study was again flawed by a small and skewed sample size (of predominantly white males), observer bias, heavy reliance on self-report and the absence of statistically significant results. In 1995, using research collected over 10 years, American psychiatrist Arnold Ludwig found that between 59 % and 77% of artists, writers and musicians suffered from mental illness, compared to 18 to 29% of other professionals [4]. His data was indirectly obtained from the biographies of 2200 prominent creatives and relied heavily on retrospective analysis and personal interpretation. A similar study involving a retrospective analysis of 291 'famous' males in a variety of creative professions noted that severe personality

disorders were more frequent amongst writers and visual artists [5]. This study made use of biographical information to identify symptoms that were then classified according to DSM III criteria and thus was subject to heavy reliance on self-report and observer bias.

More recently, a 2006 study found that poets and artists have more unusual experiences (perceptual abnormalities, magical thinking and hallucinations) than controls (selected by convenience sampling in a town in Southern England) and almost as frequent as individuals with schizophrenia [6]. A 2011 Swedish case-control study which involved 300 000 participants found that individuals with bipolar disorder and healthy siblings of individuals with schizophrenia or bipolar disorder were overrepresented in creative professions [7]. It was also noted that members of the schizophrenia subgroup were more likely to hold artistic occupations, and especially visual artistic occupations. In 2006 a study published in the British Journal of Psychology found that in a sample of 107 students from the University of London, visual artists scored higher than non-artists on cognitive disorganization, impulsive nonconformity, neuroticism, openness and divergent thinking (uniqueness) [8].

Various mechanisms to explain a higher prevalence of mental illness in creative individuals have been proposed. In examining the relationship between creativity and specifically mood disorders, Richards proposed five possible links [9]. The first and second theories examine the causal relationship between mood disorders and creativity, either via a mediating factor or directly. Proponents of these theories emphasize the link between bipolar disorder and creativity (with increased motivational drive and increased cognitive fluency) [10] rather than that of unipolar depression. However, unipolar depression may contribute towards increased sensitivity and awareness, providing depth of material for reflection [9]. The third and fourth theories propose that creativity may result in a mood disorder, either indirectly or directly, by negatively affecting

the regulation of mood [11], although this theory is by no means comprehensive. The fifth theory postulates a currently unknown factor which may cause both creativity and mood disorder. A systematic review and meta-analysis conducted in 2017, which investigated the existence of a link between creativity and mood disorders found that although all mood disorders are positively associated with creativity, the association is much stronger for bipolar disorder than unipolar depression and the effects differ depending on the method of assessment of creativity [12]. Factors proposed to play a role in this positive association are unique to the creative lifestyle (stress, problems with substance use, increased emotionality and irregularity of activities) [11]. It was suggested that the greater occurrence of mood disorders in creative individuals is not a genuine finding, but rather is constructed according to societal expectation (again suggesting the notion of the ‘tortured artist’) [13].

Substance use has been well documented amongst those occupying creative professions. A systematic review published in 2016 which examined 14 empirical studies and 5 case studies found that substance use is more common in those with higher creativity than in the general population [14]. The association is based on the inter-relationship between these phenomena [15]. No direct contribution was found between substance use and increased creativity, but rather substances increased the artist’s sensitivity and experiences – thus changing the quality of the artistic product [16]. It was suggested that substances stabilize the ‘unstable functioning’ of many of those in the creative professions [17].

Obstacles and Pitfalls

Although some of the above studies have supported a correlation between mental illness and creativity, it is almost impossible to prove it empirically. As Dr Judith Schlesinger points out, studies on this topic use non-random, highly selected and disparate populations and cannot be used

as ‘cumulative’ evidence of its existence, regardless of how similar the outcomes may be [18]. Many earlier studies relied heavily on self-report, retrospective analysis, and personal interpretation of symptoms. In a critical review of the literature, Dr Charlotte Waddell found that 15 of 29 studies found no link between creativity and mental illness [19]. A 2013 longitudinal case-control study conducted on over 1 million participants using the Swedish population registry found that with the exclusion of bipolar disorder, those with creative professions were not more likely to suffer from psychiatric illness than their controls [20].

Harvard-based Professor of psychiatry Albert Rothenberg, principal investigator of the “Studies in the Creative Process” project, describes three main creative cognitive processes – the Janusian Process [21] – conceiving multiple opposite constructions simultaneously), the homospatial process [22] (conceiving two or more entities in the same mental space and articulating new identities) and the sep-con articulation (actively conceiving connection and separation at the same time). He highlights in his studies that these processes are used in a perfectly rational and conscious frame of mind and not in an altered mental state. He refers to them as ‘translogical’ and not ‘illogical’ thought processes [23]. He therefore rejects the notion that creativity and mental illness bear a significant correlation.

A 2014 systematic review which examined 111 studies on creativity and psychopathology found that the association between creativity and psychopathology is not as clear as is generally argued in essays and theoretical articles [24]. This field of research is plagued by various obstacles such as methodological weaknesses and heterogeneous study results, as well as varying definitions of creativity. In general results should be interpreted with caution. However, as 75% of the studies did find a positive correlation, the suggestion is that further research with more standardized methodology is needed.

Overall, this field of research is plagued by several obstacles:

Trying to establish a link between ‘creativity’ and ‘mental illness’ poses a question that is too broad and too abstract to answer. Creativity can refer to several domains of ability. Mental illness encompasses a vast spectrum of disorders ranging from personality disorders to overt psychosis [25].

Many of the studies have been flawed by methodological errors yet are still widely quoted and used in substantiation of viewpoints.

Mental illness in visual artists

There is a paucity of literature concerning the prevalence of mental illness specifically amongst visual artists, and no such research has been conducted in South Africa. A 2006 study at the University of London found that visual artists scored higher on measures of positive-schizotypy (unusual perceptual experiences), disorganized-schizotypy, asocial-schizotypy (social withdrawal, anhedonia), neuroticism, openness and divergent thinking (uniqueness) than did a non-artist group [8]. A case control study based on Swedish population registries conducted in 2018 found an association between studying an artistically creative subject and hospitalization for schizophrenia, bipolar disorder and unipolar depression. The association was highest in the case of visual artists [26].

Creativity is only one possible contributing factor to the risk of mental illness in visual artists. A study published in 1999 found that difficult financial circumstances and the stress associated with rejection of creative products may increase the risk of suicide amongst artists [27]. A 2018 study at the University of Budapest which compared 130 art students to non-art student controls found higher rates of substance use amongst art students [28]. In 2007 a study by Preti and Vellante

compared 80 creative artists with 80 non-creative controls, matched for age and gender. Creative artists scored higher on the Peters et al Delusions Inventory independent of their score on the General Health Questionnaire [14].

Prevalence of Mental Disorders in South Africa

The South African Stress and Health Study conducted between 2002 and 2004 established the 12-month prevalence of any common mental disorder in South Africa to be 17% [29]. Anxiety disorders were found to have the highest 12-month prevalence at 8,1%. The prevalence of major depressive disorder was 4,9% and that of substance use disorders 5,8%. The most common substance of abuse was alcohol. Interestingly, individuals with low-average income had a decreased risk of mental disorders compared to those with high income, although members of the public with no fixed abode were not included in the survey, which may have impacted results. Risk factors associated with the prevalence of mental illness were age between 35 and 49 years, higher income, and separation or divorce. Considering this high prevalence of mental disorders in South Africa, as well as the suspected vulnerability of visual artists to these disorders, as demonstrated by international research, it is imperative that such research be conducted within our setting.

Prevalence of mental disorders in artists (including visual artists) in South Africa

A search of literature yielded no South African studies.

Selection of screening tools

The Substance Abuse and Mental Illness Symptom Screener (SAMISS) exists in 2 forms – as a 13-item questionnaire as well as a 16-item questionnaire. The 16-item questionnaire incorporates a 3-question subscale taken from the Alcohol Use Disorders Identification Test (AUDIT). The mental illness component screens for the presence of depression, anxiety, post-traumatic stress

disorder and adjustment disorder. It was originally designed for the purposes of screening for substance abuse and mental illness in HIV positive individuals in primary care settings [30]. The original goal behind the development of the SAMISS was to assess both substance abuse and mental illness in under 10 minutes and avoid any symptoms of HIV disease progression which could be incorrectly interpreted as symptoms of mental illness. [31]

A study investigating the validity of the tool was conducted in a primary HIV care clinic based at the University of North Carolina. The specificity and sensitivity of the SAMISS was compared to the Structural Clinical Interview for DSM-IV (SCID), which due to its widely accepted validity was used as reference standard. SAMISS was found to have high sensitivity and moderate specificity [31]. One finding was that the SAMISS became less specific the more HIV-related symptoms were reported by the respondent.

A cross-sectional validity study was performed at 2 primary health care clinics in Cape Town, South Africa [30]. The sensitivity and specificity were noted to be higher for the alcohol and substance abuse parts of the questionnaire than for the mental illness part. When compared to the gold standard reference, the Mini International Neuropsychiatric Interview (MINI), the SAMISS was found to have high sensitivity and moderate specificity of 95 % and 58 % respectively [30]. Using a ROC analysis, it was noted that the specificity could be increased and the sensitivity only slightly altered if the cut-off for a positive screen for mental illness component (questions 8-16) was taken as a respondent answering yes to 2 or more questions [2]. For the first part of the questionnaire a respondent screens positive if sum of responses to questions 1–3 is ≥ 5 , response to question 4 or 5 is ≥ 3 , or response to question 6 or 7 is ≥ 1 .

No studies could be found regarding the validity of the use of the SAMISS in a population whose HIV status is not known, and this must therefore be considered a limitation. As this study examines

only the prevalence of common mental disorders, a decision was taken to omit questions 8 and 15, which deal with the manic episode of Bipolar I Disorder and Post-Traumatic Stress Disorder respectively.

Summary of Literature Review

Based on the overall positive association between creativity and psychopathology, and despite the various methodological challenges and non-standardized definitions of creativity, the overall positive association between creativity and psychopathology warrants further investigation. This is supported by the dearth of literature within the South African context and the presence of anecdotal evidence of distress experienced by visual artists.

RATIONALE

Visual art can be defined as a creative form of art whose products are appreciated by sight. This can include drawing, painting, sculpture, ceramics and photography. The Visual Arts Network of South Africa (hereafter referred to as VANSa) is a development agency for contemporary South African artists. Its membership consists of both artists and art organizations and it provides employment opportunities, funding, educational tools and legal support. South African artists face challenges common to all artists such as lack of financial security, irregular employment and erratic workload. There has been anecdotal evidence within the South African visual arts community of high rates of substance abuse, mental health problems and suicidality. However, no research has been conducted to confirm this perception. VANSa wishes to more accurately determine the extent of the problem so that it can develop or facilitate mental health interventions for its members.

HYPOTHESIS

There will be a statistically significantly higher prevalence of symptoms of common mental disorders amongst visual artists in South Africa compared to the general population.

AIM

To determine the prevalence of symptoms of common mental disorders amongst visual artists in South Africa using the Visual Arts Network of South Africa as a study population and the SAMISS as a screening tool.

OBJECTIVES

1. To describe the demographic profile of a convenience sample of members of the Visual Arts Network of South Africa.
2. To determine the prevalence of symptoms of common mental disorders (depressive, anxiety and substance use disorders) in this sample using the SAMISS screening tool, and to compare these with existing studies of these disorders in the general South African population.
3. To explore associations between symptoms of mental disorders and various demographic factors.

METHODOLOGY

OPERATIONAL DEFINITIONS

Visual artist: an artist who creates products that can be appreciated with the sense of sight, e.g., a painter, sculptor, photographer, installation artist

VANSA: The Visual Arts Network of South Africa : an agency that furthers the interests of contemporary South African artists by providing learnership opportunities, educational tools, platforms for exposure and career guidance

COMMON MENTAL DISORDERS: This refers to depressive, anxiety and substance use disorders as defined by the Diagnostic and Statistical Manual of Mental Disorders (5th Edition), hereafter referred to as CMD

SERIOUS MENTAL ILLNESS: This refers to schizophrenia and other psychotic disorders and bipolar disorder.

SAMISS Substance Abuse and Mental Illness Symptom Screener, that screens for common mental disorders and substance abuse developed by the University of North Carolina and Duke University

STUDY DESIGN

This is a cross-sectional observational study. The study population will consist of members of VANSA. A survey will be compiled using the online tool, Survey Monkey. The SAMISS will form part of the questionnaire. The remainder of the questionnaire will ascertain demographic details such as age, sex, and whether the artist has a past psychiatric history and reliable or unreliable source of income. The survey will be distributed electronically using VANSA's existing email distribution list to all members of VANSA. An information sheet will be distributed with the survey inviting members to participate in an anonymous survey. A one-month period will be provided for completion of the survey.

Inclusion Criteria

- Members of VANSA

- Able to read, understand and respond to an English survey questionnaire
- Age of 18 years and older

Exclusion Criteria

- Any member of VANSAs who declines participation in the study

Sample size

Data for the study will be collected from respondents online. An assessment of Z scores of expected frequencies indicates that a sample size of 360 will detect statistical significance at the 5% level. Realistically, statistical significance can be expected with a minimum sample of 132 participants. VANSAs has a total member database of 7579 members, with 2384 active members.

Data Analysis

Statistical analyses will be conducted in R software (version 4.0.0; www.R-project.org). Data sets will be assessed for departure from normality using the Shapiro–Wilk test and examining Q-Q plots.

Objective 1: The following socio-demographic variables will be collected from respondents of the Visual Arts Network of South Africa:

- age in years
- gender (male, female, non-binary)
- In which province the artist is currently based

- To which racial group the artist belongs (this question is included to explore possible link between race, income status and mental health)
- number of dependents
- relationship status
- education level (none, schooling level, tertiary level)
- significant current physical illness and type
- percentage income derived from artistic occupation
- current role within the visual arts sector
- income level (ZAR per month)
- whether the artist has ever worked with a gallery or museum\
- whether the artist has ever done a residency
- time spent within the visual arts sector
- description of current employment

To describe the demographic profile, categorical data will be plotted using charts, and continuous data with bar charts and scatterplots. Data will be presented as totals, percentages, means and standard deviations, as required.

Objective 2: For a positive screen for mental illness component (questions 8-16) a respondent must answer yes to 2 or more questions [2]. To determine the prevalence of common mental disorders, the percentage of respondents with and without mental disorders will be calculated, and the number statistically analysed using Pearson's chi-squared good of fitness tests.

Objective 3: For the first part of the questionnaire a respondent screens positive if the sum of responses to questions 1–3 is ≥ 5 , responses to question 4 or 5 is ≥ 3 , or responses to question 6 or

7 is ≥ 1 , .To determine the prevalence of a possible substance use disorder, the percentage of respondents with and without substance use disorder will be calculated, and the number statistically analysed using Pearson's chi-squared good of fitness tests.

Objective 4: To analyse the relationship between symptoms of mental disorder and the

socio-demographic factors described in objective 1, Pearson's chi-squared tests for

independence (using Yates' correction, as appropriate) tests will be used to analyse these categorical

variables between respondents with and without mental disorder. T-tests (or non-parametric Mann-Whitney U tests) will be used to analyse continuous data by mental

disorder.

Sample bias will be addressed in the following ways:

Selection bias will be addressed by removing control variables which are found to be highly correlated with the presence of common mental disorders and running the results without this variable.

Sample balance will be addressed by comparing the characteristics of the survey population (e.g., level of income) to that of the VANSAs population (if available) and ascertaining whether these characteristics reflect the normal distribution within society.

Self-selection bias will be unavoidable as the survey is conducted on an opt-in basis. This will be recognized and possible effects will be explored. One factor that may cause bias is that artists willing to participate in the survey may be in a less positive frame of mind. Therefore, a control

variable relating to the person's feelings towards completing the survey (very eager to participate, somewhat eager, indifferent, not eager but participating for the benefit of the research) will be introduced and the answers will be used to assess and attempt to correct for this form of bias.

ETHICS

The proposal will be submitted to the Human Resources Ethics Committee of the University of the Witwatersrand to obtain ethical clearance. As this is an electronic survey, responses will be anonymous and no identifying data will be collected. An information leaflet outlining the purpose and method of the study will be provided, and consent will be assumed for those who complete the survey. Information regarding referral resources, such as contact details of public sector mental health services, SADAG (South African Depression and Anxiety Group) as well as Narcotics Anonymous and Alcoholics Anonymous will be provided.

LIMITATIONS

The questionnaire will be distributed in English only and therefore may prevent the participation of non-English speaking members of VANSAs. The use of survey means that the interviewer cannot put in a control variable for the perceived state of mind of the respondent – e.g., the respondent may omit certain answers or fail to complete the survey, which will affect the sample size. Sample bias is unavoidable as the survey operates on an opt-in basis. Therefore, this will need to be explored and accounted for as far as possible. The current COVID-19 pandemic and the resultant increased financial pressure faced by artists may also skew results. The SAMISS is a screening tool that cannot distinguish between specific mental disorders, but rather identifies general psychological distress. This means that the study will not be able to provide specific numbers on depressive versus anxiety disorders, and these will be categorised together.

Participants may also not be reliable regarding the quantities of substances used and may minimize substance use, affecting the accuracy of results. Serious mental disorders will not form part of this research.

TIMING

	Jan 2020	Feb 2020	March 2020	April 2020	May 2020	June 2020	July 2020	Aug 2020	Sept 2020	Oct 2020	Nov 2020	Dec 2020
Literature Review												
Preparing Protocol												
Protocol Assessment												
Ethics Application												

	Jan 2021	Feb 2021	March 2021	April 2021	May 2021	June 2021	July 2021	Aug 2021
Data Collection								
Data Analysis								
Writing up report								

FUNDING

Proposed expenditure for the research will consist of transportation costs for meetings with coordinators of VANSAs, printing costs throughout various stages of the research, as well as the costs of internet connection/ setting up Survey Monkey. All costs will be funded by the researcher and no cost will be incurred by VANSAs, the University of the Witwatersrand or the participants themselves.

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Protocol Appendix A – Participant Consent Page

Introduction to Survey that Will be Visible to Participants

Good day

My name is Alicia Swart and I am a 2nd year registrar in the Department of Psychiatry at the University of the Witwatersrand. I am passionate about mental health as well as the creative professions. As part of my studies, I am investigating the prevalence of common mental disorders in visual artists in South Africa under the supervision of Professor Rita Thom.

As part of this project, I am inviting you to complete an online survey via Survey Monkey, which should take approximately 20 minutes. Please rest assured that the survey is completely anonymous and solely for the purposes of the completion of my master's research report, as well as to motivate for increased focus on mental illness among those with visual artistic occupations. I will not be requesting your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else.

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you choose not to.

If at any time during completion of the survey you have any questions pertaining to the research, please feel free to contact me on 364261@students.wits.ac.za. If at any point you feel distressed by the nature of the questions or feelings that you are having, please contact the support numbers made available at the end of the survey.

If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact Professor C.B. Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za.

By clicking on continue, you agree to the following:

- I have been informed by the above regarding the nature and purposes of the research and I have been provided with contact details should I have any questions about it
- My participation is entirely voluntary and I have the right to terminate or withdraw at any time without any given reason
- Data collection will be entirely anonymous and will be processed anonymously into a computerised system
- The collected data will be kept for two years if the research is published, or for six years if it is not published. After this time period, the data will be destroyed.

Many thanks for your time

Researcher:

Dr Alicia Tamahny Swart

MBBCH

Department of Psychiatry, University of the Witwatersrand

Supervisor:

Prof Rita Thom

Honorary Adjunct Professor

University of the Witwatersrand

MBBCh, DCA(SA), PhD, FCPsych(SA)

Protocol Appendix B1: SAMISS

Substance Abuse and Mental Illness Symptoms Screener (SAMISS)

For each question, please check only one box.

Substance Abuse	Mental Illness
1. How often do you have a drink containing alcohol? ☐ Never ☐ Monthly or less ☐ 2 - 4 times/mo. ☐ 2 - 3 times/wk. ☐ 4 or more times/wk.	8. In the past year, when not high or intoxicated, did you ever feel extremely energetic or irritable and more talkative than usual? ☐ Yes ☐ No
2. How many drinks do you have on a typical day when you are drinking? ☐ None ☐ 1 or 2 ☐ 3 or 4 ☐ 5 or 6 ☐ 7 - 9 ☐ 10 or more	9. In the past year, were you ever on medication or antidepressants for depression or nerve problems? ☐ Yes ☐ No
3. How often do you have 4 or more drinks on 1 occasion? ☐ Never ☐ Less than Monthly ☐ Monthly ☐ Weekly ☐ Daily or Almost Daily	10. In the past year, was there ever a time when you felt sad, blue, or depressed for more than 2 weeks in a row? ☐ Yes ☐ No
4. In the past year, how often did you use nonprescription drugs to get high or to change the way you feel? ☐ Never ☐ Less than Monthly ☐ Monthly ☐ Weekly ☐ Daily or Almost Daily	11. In the past year, was there ever a time lasting more than 2 weeks when you lost interest in most things like hobbies, work, or activities that usually give you pleasure? ☐ Yes ☐ No
5. In the past year, how often did you use drugs prescribed to you or to someone else to get high or change the ways you feel? ☐ Never ☐ Less than Monthly ☐ Monthly ☐ Weekly ☐ Daily or Almost Daily	12. In the past year, did you ever have a period lasting more than 1 month when most of the time you felt worried and anxious? ☐ Yes ☐ No
6. In the past year, how often did you drink or use drugs more than you meant to? ☐ Never ☐ Less than Monthly ☐ Monthly ☐ Weekly ☐ Daily or Almost Daily	13. In the past year, did you have a spell or an attack when all of a sudden you felt frightened, anxious or very uneasy when most people would not be afraid or anxious? ☐ Yes ☐ No
7. How often did you feel you wanted or needed to cut down on your drinking or drug use in the past year, and were not able to? ☐ Never ☐ Less than Monthly ☐ Monthly ☐ Weekly ☐ Daily or Almost Daily	14. In the past year, did you ever have a spell or an attack when for no reason your heart suddenly started to race, you felt faint, or you couldn't catch your breath? (If it was only when having a heart attack or due to physical causes, mark "no.") ☐ Yes ☐ No
	15. During your lifetime, as a child or adult, have you experienced or witnessed traumatic event(s) that involved harm to yourself or to others? ☐ Yes ☐ No If yes: In the past year, have you been troubled by flashbacks, nightmares, or thoughts of the trauma? ☐ Yes ☐ No
This questionnaire is based on the validated screening instrument developed by the University of North Carolina at Chapel Hill, Departments of Psychiatry, Medicine, Public Policy, and Community and Family Medicine; and the Health Inequities Program of Duke University.	16. In the past 3 months, have you experienced any event(s) or received information that was so upsetting it affected how you cope with everyday life? ☐ Yes ☐ No

This publication is part of a series of manuals that describe models of care that are included in the HRSA SPNS Initiative Building a Medical Home for HIV Homeless Populations. Learn more at <http://cahpp.org/project/medheart/models-of-care>

Protocol Appendix B2: Permission to use the SAMISS

From: Gaynes, Bradley Neil <bradley_gaynes@med.unc.edu>
Sent: Monday, 31 October 2022, 15:47
To: Gilmore, John H <john_gilmore@med.unc.edu>; Alicia Swart <alicia.swart@wits.ac.za>
Subject: RE: Permission to Use the SAMISS Questionnaire

Hi,

My understanding is that is in the public domain, so okay to use. And I would make sure to cite the original citation (I think it's this: **A Brief Mental Health and Substance Abuse Screener for Persons with HIV**

Kathryn Whetten, Susan Reif, Marvin Swartz, Rachel Stevens, Jan Ostermann, Laura Hanisch, and Joseph J. Eron Jr.

AIDS Patient Care and STDs 2005 19:2, 89-99)

Best,

Brad Gaynes

Bradley N. Gaynes, MD, MPH
Ray M. Hayworth, MD and Family Distinguished Professor of Psychiatry
Director, Division of Global Mental Health
Department of Psychiatry, University of North Carolina School of Medicine
Professor of Epidemiology, Gillings School of Global Public Health
Chapel Hill, NC
TEL: (919) 445-0214 FAX: (919) 445-0234
Pronouns: he/him/his

Appendix C: Protocol Coversheet



CANDIDATE'S SURNAME: [Please print] SWART		FIRST NAME/S: ALICIA TAMAHNY		STUDENT NUMBER: 364261	
CURRENT QUALIFICATIONS: BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (MBBCH) 2014					
TEL:		CELL: 0716773195		E-MAIL: 364261@students.wits.ac.za	
FAX:					
DEGREE FOR WHICH PROTOCOL IS BEING SUBMITTED: MASTER OF MEDICINE					
PART-TIME OR FULL-TIME: FULL TIME					
FIRST REGISTERED FOR THIS DEGREE:		TERM : 2 ND SEMESTER		YEAR: 2018	
DEPARTMENT: PSYCHIATRY					
TITLE OF PROPOSED RESEARCH: COMMON MENTAL DISORDERS IN VISUAL ARTISTS IN SOUTH AFRICA: PREVALENCE OF SYMPTOMS OF CMD IN MEMBERS OF THE VISUAL ARTS NETWORK OF SOUTH AFRICA					
CANDIDATE'S SIGNATURE:				DATE:	
SUPERVISOR 1 (NAME & SURNAME): PROF RITA THOM				% Supervision 100%	
SUPERVISOR'S QUALIFICATIONS: MBChB.DCH.FCPsych.PhD					
SUPERVISOR'S DEPARTMENT: Psychiatry					
SUPERVISOR'S ADDRESS / TEL / E-MAIL: Oxford Healthcare Centre, 75 Oxford Road, Saxonwold. Tel: 0833254583/Email: rita.thom@wits.ac.za					
SUPERVISOR 2 (NAME & SURNAME):				% Supervision	
SUPERVISOR'S QUALIFICATIONS					
SUPERVISOR'S ADDRESS / TEL / E-MAIL:					
SUPERVISOR 3 (NAME & SURNAME):				% Supervision	
SUPERVISOR'S QUALIFICATIONS					
SUPERVISOR'S ADDRESS / TEL / E-MAIL:					

SYNOPSIS OF RESEARCH: (Brief summary of proposed research project; between 200-300 words only; with sub-headings: an introduction and justification for study, aim/s, proposed methodology and expected outcome/s)
[Use reverse side of this page if more space is required]

Introduction: There is a longstanding widely held association between creativity and mental illness in the literature. Although various international studies have suggested this link, no such research has been done in South Africa. It has been proposed that visual artists are particularly at risk for common mental disorders (depression and anxiety) and substance use disorders due to various factors, including environmental factors (such as unstable income and socio-economic difficulties), causal genetic factors as well as the nature of the subject matter to which artists are frequently exposed. Anecdotally, this has also been observed by members of the Visual Arts Network of South Africa, an organization which aims to provide support and communication within the South African context.

Aim: To determine prevalence of symptoms common mental disorders and substance use disorders amongst visual artists in South Africa, using the Visual Arts Network as a sample population.

Proposed Methodology: An online survey will be distributed amongst the members of VANSA via electronic mail. The survey will be composed of the SRQ-20, the ASSIST as well as questions pertaining to demographic factors. A one- month period for completion of the survey will be provided.

Expected Outcomes: Visual artists are expected to have a higher prevalence of common mental disorders and/or substance use disorders than the general population.

WITS ETHICS NOT REQUIRED:
WITS ETHICS PENDING:
WITS ETHICS APPROVED:
(circle appropriate symbol)*

Yes	No
☒	☐
Yes	No

IF Y SUPPLY ETHICS
CLEARANCE CERTIFICATE AS
ATTACHMENT AND INCLUDE
ETHICS NUMBER HERE:

*Please note the final human ethics clearance certificate or animal ethics certificate must be available prior to starting research

As supervisor/s, I/we confirm that I have read the protocol which has been submitted for assessment.

SIGNATURE OF SUPERVISOR/S:

..........

SIGNATURE PG OFFICE STAFF

REGISTERED

STAMP

YES..... NO.....

Protocol Appendix D: Approval by Postgraduate Committee

UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG



WITS SCHOOL OF
CLINICAL
MEDICINE

27th August 2020

To the Chairperson,
WITS Human Research Ethics Committee (Medical)

RE: APPROVAL OF REVISED MMED PROTOCOL -

"COMMON MENTAL DISORDERS IN VISUAL ARTISTS IN SOUTH AFRICA: PREVALENCE AND
ASSOCIATED FACTORS"

Dr Alicia Tamahny Swart

Student number: 364261

This serves to confirm that the MMed research protocol of the abovementioned candidate has been revised and approved in accordance to the recommendations of the assessor group (meeting held on 8th of July 2020) and to the satisfaction of the supervisor.

Yours sincerely

Dr Belinda Marais
Research Committee Chairperson
WITS Department of Psychiatry
MBBCh (WITS), DipHIVMan (SA), FCPsych (SA), MMED (WITS)
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Protocol Appendix E Approval of Change of Title



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24 May 2022
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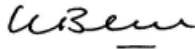
Dear Dr Alicia Swart

Master of Medicine in Psychiatry: Change of title of research

I am pleased to inform you that the following change in the title of your Research Report for the degree of **Master of Medicine in Psychiatry** has been approved:

From: **Common mental disorders in visual artists in South Africa: prevalence and associated factors**
To: **Common mental disorders in visual artists in South Africa: Occurrence of symptoms and associated factors**

Yours sincerely



Mrs Sandra Benn
Faculty Registrar
Faculty of Health Sciences

Protocol Appendix F: HREC Clearance Certificate



R14/49 Dr Alicia Swart

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M201032 MED20-07-098

NAME: Dr Alicia Swart
(Principal Investigator)
DEPARTMENT: School of Medicine
Surgery Monkey
PROJECT TITLE: Common mental disorders in visual artists in South
Africa: Prevalence and Associated Factors
DATE CONSIDERED: 30/10/2020
DECISION: Approved unconditionally
CONDITIONS:
SUPERVISOR: Prof Rita Thom
APPROVED BY: 
Dr C Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL: 02/11/2020

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary in Room 301, Third floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report.** The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed October and will therefore be due in the month of October each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature

Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Protocol Appendix G Survey Questions as on Survey Monkey

Message from Visual Arts Network of South Africa

The Visual Arts Network of South Africa (VANSA) has identified a lack of support and knowledge around mental health in the visual arts sector and acknowledges that there is a perception of a higher prevalence of people dealing with mental health challenges in the arts than in the general public. During the process of investigating this, we approached Professor Rita Thom at the University of the Witwatersrand and in our conversations realised that we wanted to understand the prevalence and effects of depression and anxiety in the sector and also assess the degree to which substance use impacts this and is potentially being used as a self-treatment. Dr Alicia Swart together with Prof Thom as her supervisor have developed this survey we're asking you to fill out. The findings will be shared, but individual anonymity is guaranteed. VANSA will use the data to continue working on advocating for artists and developing related programming. Due to the specific nature of the study, the questions are limited but VANSA is undertaking to explore other aspects of mental health and care through other avenues. Please visit the project website for further info and resources: www.vansatake.care

COMMON MENTAL DISORDERS IN VISUAL ARTISTS IN SOUTH AFRICA: PREVALENCE AND ASSOCIATED FACTORS

Good day

My name is Alicia Swart and I am a doctor specializing in psychiatry at the University of the Witwatersrand. I am passionate about mental health as well as the creative professions. As part of my studies, I am investigating the prevalence of common mental disorders in the visual arts sector in South Africa under the supervision of Professor Rita Thom.

I am inviting you to complete an online survey via Survey Monkey, which should take approximately 10 minutes. Please rest assured that the survey is completely anonymous and solely for the purposes of the completion of my master's research report, as well as to motivate for increased focus on mental illness among those with visual artistic occupations. I will not be requesting your name or any identifying information, and the information you give to me will be held securely and not disclosed to anyone else.

There will be no personal costs to you if you participate in this project. You will not receive any direct benefits from participation but there are no disadvantages or penalties if you do not choose to participate or if you withdraw from the study. You may withdraw at any time or not answer any question if you choose not to.

If at any time during completion of the survey you have any questions pertaining to the research, please feel free to contact me on 364261@students.wits.ac.za. If at any point you feel distressed by the nature of the questions or feelings that you are having, please contact the support numbers made available at the end of the survey.

If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact Professor C.B. Penny, Chairperson of the Human Research Ethics Committee (Medical) at the University of Witwatersrand, on telephone no. 011 717 2301, or by e-mail at Clement.Penny@wits.ac.za.

By clicking on continue, you agree to the following:

- I have been informed by the above regarding the nature and purposes of the research and I have been provided with contact details should I have any questions about it
- My participation is entirely voluntary and I have the right to terminate or withdraw at any time without any given reason
- Data collection will be entirely anonymous and will be processed anonymously into a computerised system
- The collected data will be kept for two years if the research is published, or for six years if it is not published. After this time period, the data will be destroyed.

Many thanks for your time

Researcher:

Dr Alicia Tamahny Swart
MBBCH
Department of Psychiatry, University of the Witwatersrand

Supervisor:
Prof Rita Thom
Honorary Adjunct Professor
University of the Witwatersrand
MBBCh, DCA(SA), PhD, FCPsych(SA)

1. How old are you?

2. What is your gender?

- ☐ Male
- ☐ Female
- ☐ Non-binary

3. In which province are you currently based?

- ☐ Gauteng
- ☐ Mpumalanga
- ☐ Kwazulu-Natal
- ☐ Western Cape
- ☐ Eastern Cape
- ☐ Northern Cape
- ☐ Limpopo
- ☐ Free State
- ☐ North-West
- ☐ I am not currently based in South Africa

4. To which racial group do you belong?

- ☐ Black
- ☐ White
- ☐ Indian

- ☐ Coloured
- ☐ Asian
- ☐ I prefer not to disclose

5. How many people are dependent on you for financial support?

- ☐ None
- ☐ 1-2
- ☐ 3-4
- ☐ More than 4

6. What is your highest education level?

- ☐ Primary Schooling
- ☐ Secondary Schooling
- ☐ Tertiary Qualification

7. Are you suffering from any chronic physical illness?

- ☐ Yes
- ☐ No

8. If you answered yes to question 7, what is the nature of the illness? (If you feel comfortable to disclose)

9. What is your relationship status?

- ☐ Single
- ☐ In a relationship/married
- ☐ Divorced/Separated
- ☐ Widowed
- ☐ Other

10. What percentage of your income is derived from artistic occupation?

- ☐ <25%

- ☐ 25-50%
- ☐ 50-75%
- ☐ 75-100%

11. What is your role in the visual arts sector?

- ☐ Visual artist
- ☐ Curator
- ☐ Arts administrator/manager
- ☐ Technical support
- ☐ Academic
- ☐ Student
- ☐ Other

12. What is your current monthly income level?

- ☐ <R10 000
- ☐ R10 000 - R20 000
- ☐ R20 000- R30 000
- ☐ >R30 000

13. Have you ever worked with a gallery/museum before?

- ☐ Yes
- ☐ No

14. Have you been on an artist residency before?

- ☐ Yes
- ☐ No

Question Title

15. For how many years have you been involved in the visual arts sector?

- ☐ <1 year

- ☐ 1 - 5 years
- ☐ 5-10 years
- ☐ >10 years

Question Title

16. How would you describe your current employment?

- ☐ Permanently employed within the arts sector
- ☐ Self-employed within the arts sector
- ☐ Entrepreneur within the arts sector
- ☐ Freelancer within the arts sector
- ☐ Employed outside of the arts sector to sustain my artistic career

Question Title

17. How often do you have a drink containing alcohol?

- ☐ Never
- ☐ Monthly or less
- ☐ 2-4 times per month
- ☐ 2-3 times per week
- ☐ 4 or more times per week

Question Title

18. How many drinks do you have on a typical day when you are drinking?

- ☐ None
- ☐ 1 or 2
- ☐ 3 or 4
- ☐ 5 or 6
- ☐ 7-9

- ☐ 10 or more

19. How often do you have 4 or more drinks on 1 occasion?

- ☐ Never
- ☐ Less than monthly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or almost daily

20. In the past year, how often did you use non-prescription drugs to get high or to change the way you feel?

- ☐ Never
- ☐ Less than monthly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or almost daily

21. In the past year, how often did you use drugs prescribed to you or to someone else to get high or change the way you feel?

- ☐ Never
- ☐ Less than monthly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or almost daily

22. In the past year, how often did you drink or use drugs more than you meant to?

- ☐ Never

- ☐ Less than monthly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or almost daily

23. How often did you feel you wanted or needed to cut down on your drinking or drug use in the past year, and were not able to?

- ☐ Never
- ☐ Less than monthly
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or almost daily

24. In the past year, were you ever on medication or antidepressants for depression or nerve problems?

- ☐ Yes
- ☐ No

25. In the past year, was there ever a time when you felt sad, blue, or depressed for more than 2 weeks in a row?

- ☐ Yes
- ☐ No

26. In the past year, was there ever a time lasting more than 2 weeks when you lost interest in most things like hobbies, work, or activities that usually give you pleasure?

- ☐ Yes
- ☐ No

27. In the past year, did you ever have a period lasting more than 1 month when most of the time you felt worried and anxious?

☐ Yes

☐ No

28. In the past year, did you have a spell or an attack when all of a sudden you felt frightened, anxious or very uneasy when most people would not be afraid or anxious?

☐ Yes

☐ No

29. In the past year, did you ever have a spell or an attack when for no reason your heart suddenly started to race, you felt faint, or you couldn't catch your breath? (If it was only when having a heart attack or due to physical causes, mark "no.")

☐ Yes

☐ No

30. In the past 3 months, have you experienced any event(s) or received information that was so upsetting it affected how you cope with everyday life?

☐ Yes

☐ No

31. To what extent do you feel your responses would have been different prior to the effects of the Covid-19 pandemic and subsequent lockdowns?

☐ My responses would have been the same

☐ My responses would have been slightly different

☐ My responses would have been very different

32. If your responses would have been different, please elaborate in what they may have differed.

33. How did you feel about participating in this survey?

- ☐ Very eager
- ☐ Somewhat eager
- ☐ Indifferent
- ☐ Not eager, but participated for the benefit that may be derived from the research

34. Thank you so much for completing this survey. Please be assured that your responses are completely anonymous.

If you became distressed during any part of the survey/you have realized that you may require professional mental health care services, please take note of the following important contact details :

South African Depression and Anxiety Group (SADAG) - www.sadag.org

Cipla 24hr Mental Health Helpline 0800 456 789

Suicide Crisis Line 0800 567 567

Akeso Psychiatric Response Unit 24 Hour 0861 435 787

Cipla Whatsapp Chat Line 076 882 2775

**Department of Social Development Substance Abuse Line 24hr helpline
0800 12 13 14
SMS 32312**

Turn-it-in Report for research report paper in the ‘submissible’ format

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by Alicia Swart

Submission date: 19-Oct-2022 09:35PM (UTC+0200)

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**COMMON MENTAL DISORDERS IN VISUAL
ARTISTS IN SOUTH AFRICA: OCCURRENCE OF
SYMPTOMS AND ASSOCIATED FACTORS**

**Alicia Tamahny Swart
(364261)**

**A research report (in the format of a “submissible” paper)
submitted to the Faculty of Health Sciences, University of
the Witwatersrand, Johannesburg in fulfilment for the
requirements of the degree of**

Master of Medicine (Psychiatry), 2022

Declaration

I, Alicia Tamahny Swart, hereby declare that this research is of my own, unaided work. I am submitting this research report for the degree Master of Medicine in Psychiatry (in submissible format with my protocol) in the branch of Psychiatry at the University of the Witwatersrand, Johannesburg. This research report has not been submitted before for any degree or examination at this or any other university.

AT Swart

(signature of candidate)

Date

Contribution Of The Candidate To The Paper

Declaration: Student's contribution to article(s) and agreement of co-author(s)

I, Alicia Tamahny Swart, student number 364261, declare that this Research Report is my own work and that I have contributed significantly towards the research finding presented in the paper intended for publication below.

Signature of Student

Date:

Name of primary supervisor: Professor Rita Thom

Signature of Primary Supervisor

Date:

Agreement by co-authors: By signing this declaration, the co-authors listed below agree to the use of the article(s) by the student as part of her Research Report. In cases where the student is not the 1st author of a published article, the primary supervisor must explain (under comments) why the student is entitled to use the paper for his/her degree purposes.

Article Title: Common mental disorders in visual artists in South Africa: Occurrence of symptoms and associated factors

Authors	Name	Signature	Date
1 st author	Dr Alicia Tamahny Swart		
2 nd author	Professor Rita Thom		

Dedication

I dedicate this research report to my late father, Nicolaas Jacobus Swart, whose belief in me never wavered and continues to inspire.

Acknowledgements

I would like to thank my supervisor, Professor Rita Thom, for her support, guidance and advice throughout this research project.

I extend gratitude to the directors of the Visual Arts Network of South Africa, without whom this research would not have been possible. I would also like to thank each member of the Visual Arts Network who took the time to complete the survey. I hope that this research will promote better mental health support to members of the visual arts community.

Thank you to Professor Neville Pillay for your assistance with data analysis.

Thank you to my husband, mother, brother, family and friends, whose unfailing support and love made the completion of this research project possible.

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Introduction

Various studies report a link between creativity and mental illness. However, they are hampered by methodological difficulties, lack of standardized definitions of creativity and mental illness, diverse populations and disparate designs [1]. One cannot view these studies as “cumulative evidence”, regardless of similar results [2]. Studies can be divided into those that examine psychopathology in established creative individuals, and those that determine the creativity of individuals with known psychopathology [3]. To avoid bias that may result from the effects of mental illness, the latter group may include studies of relatives of individuals with mental illness [3,4,5].

Nancy Andreasen compared a group of 30 writers with matched controls [6]. 80% of writers reported an episode of affective illness, versus 30% of controls. In her 1989 study of 47 influential British artists and playwrights, Kay Jamison found that 38% had been treated for an affective illness [7]. Arnold Ludwig reviewed the biographical details of 1405 individuals in creative and non-creative professions. [8] and found that visual artists, specifically, were more likely to suffer from depression and anxiety than non-creative controls. A 1996 study of 291 ‘world-famous’ men, revealed that 41.7 % of artists suffered from a depressive condition, and 8.3% suffered from anxiety [9]. These studies relied heavily on self-report, retrospective analysis, and authors’ personal interpretations. Participants were predominantly male and Caucasian and therefore not easily generalizable.

The second group includes a large-scale case-control Swedish study which examined the creativity of individuals with known psychopathology and their relatives. Creative professions were more common in the 300 000 individuals with bipolar disorder or Schizophrenia and their relatives than in the general population [3].

Reviewing literature pertaining to visual artists, a 1949 study of 294 German-born “artistic and scientific geniuses”, found a higher prevalence of psychosis and psychoneurosis amongst the sample group than the average population [10]. A University of Hungary study which made use of the Basic Symptoms Inventory (BSI), compared 182 art students to 704 controls, and found that art students scored higher on psychoticism, hostility and phobic anxiety [11]. Two UK-based studies supported this association [12,13].

A 2016 systematic review found that substance use is more common in creative individuals [14]. A University of Athens study compared substance use amongst 57 artists (including visual artists) compared to 61 non-artist controls and found that the use of substances was significantly higher in artists [15]. Preti and Velante found substance use in a group of 80 Italian art students (musicians, painters and writers) to be consistently higher than in 80 matched controls [16]. Iszaj et al found that being an art student may be a risk factor for early onset of substance use and that art students used a wider array of substances and more frequently than non-art controls [11]. Knafo postulates that artists may use substances to evolve to a heightened perceptual state [17].

There are no published studies of the prevalence of common mental disorders (depressive, anxiety and substance use disorders) in visual artists in low- and middle-income countries.

The South African Stress and Health Study established the 12-month prevalence of common mental disorders amongst the general population to be 17% [18], but no literature could be found regarding the prevalence of mental illness in visual artists in South Africa.

The Visual Arts Network of South Africa (VANSA) supports art practice by striving to decentralise art resources, supporting already-existing artistic initiatives, developing learning platforms and providing opportunities for work and education [19]. The researchers were contacted by VANSA, who had noted anecdotally a high percentage of its members appeared to be affected by mental health difficulties, and

requested research to confirm this observation, to facilitate the development and governmental funding of mental health initiatives.

Despite methodological challenges and non-standardized definitions of creativity, the overall positive association between creativity and psychopathology warrants further investigation. This is supported by the dearth of South African literature, anecdotal evidence of distress experienced by visual artists, high prevalence of mental disorders among the general population, as well as the suspected vulnerability of visual artists to these disorders.

Aim and Objectives:

This study aimed to determine the occurrence of symptoms of common mental disorders amongst visual artists in South Africa.

The study objectives were as follows:

- To describe the demographic profile of a convenience sample of members of the Visual Arts Network of South Africa (hereafter referred to as VANSANSA)
- To determine the occurrence of symptoms of common mental disorders (depressive, anxiety and substance use disorders) in this sample using the Substance Abuse and Mental Illness Symptom Screener (SAMISS), and to compare these with existing studies of these disorders in the general South African population
- To explore associations between symptoms of mental disorders and various demographic factors

Research methods and design

Study Setting

This was an online survey distributed to members of VANSANSA via Survey Monkey.

Study Design

This was a cross-sectional observational study screening for the occurrence of symptoms of common mental disorders.

Study population and sampling strategy

The study population was a convenience sample of the membership of VANSANSA. The survey was designed on Survey Monkey and forwarded to all approximately 7000 members on the VANSANSA emailing list. A minimum sample size of 132 was required for statistical significance. The final sample size was 231. Inclusion criteria were that participants were members of VANSANSA aged 18 years and above with sufficient English proficiency to participate.

Data Collection Tools

The Substance Abuse and Mental Illness Symptom Screener was developed in 2005 [20]. The high co-occurrence of HIV, mental illness and substance abuse problems indicated a need to develop a screening tool which could rapidly detect symptoms of mental illness and substance abuse in this population [20].

The substance use section comprises questions from the Alcohol Use Disorders Identification Test, the Two Item Conjoint Screen for Alcohol and Other Drug Problems, one question around the use of illicit drugs such as heroin, and one question about prescription drug abuse. The mental illness symptoms section comprises questions from the Composite International Diagnostic Interview, covering depression, anxiety and panic attacks as well the use of medication for depression or 'nerve problems'. The original study which validated the SAMISS was conducted at the University of Carolina [21]. A cross-sectional study at 2 primary health care clinics in Cape Town, found that when compared to the gold standard reference, the Mini International Neuropsychiatric Interview (MINI), the SAMISS had a high sensitivity and moderate specificity of 94 % and 58 % respectively [22]. Using a ROC analysis, the specificity could be increased, and the sensitivity only slightly altered if the cut-off for a positive screen for mental illness component (questions 8-16) was increased (see Figure 1). A cut-off of 3 was found to have the best predictive value and was therefore used in our study.

The SAMISS exists in a 16-item and 13-item format. For the purposes of this research, the 16-item format was utilized. As this study examines the occurrence of common mental disorders, and not the so-called severe mental disorders, questions 8 and 15 were omitted, which deal with a manic episode of Bipolar I Disorder and Post-Traumatic Stress Disorder respectively. There is no published literature where the SAMISS has been used in populations not previously determined to be HIV positive.

Demographic variables were collected to determine a correlation between them and the occurrence of symptoms of common mental disorders. The variables were:

- Age
- Province in which artist resides
- Number of dependents
- Relationship status
- Education level
- Percentage of income derived from any artistic occupation
- Presence of any significant current physical illnesses
- Income level (in ZAR)
- Time spent within the visual arts sector
- Role in the visual arts sector and
- Description of current employment

A question regarding how respondents would have answered differently prior to the Covid-19 pandemic and subsequent lockdowns was included. The options were 'slightly different', 'very different', or 'identical'.

The survey consisted of an introduction by VANSAs, and an information page composed by the researcher. By selecting "ok" the participant provided informed consent for anonymous participation. Subsequent questions pertained to demographic variables, symptoms of substance use and common mental disorders. Participants were provided with contact details of emergency mental health services, such as the South African Depression and Anxiety Group, and a suicide crisis line.

Data analysis

Data were collected over a period of 3 months (July 2021 – September 2021) and exported from Survey Monkey to Excel. Statistical analyses were conducted in R software (version 4.0.0; www.R-project.org). Data sets were assessed for departure from normality using the Shapiro–Wilk test.

Socio-demographic variables were analyzed using Pearson's chi-squared good of fitness tests to assess whether the distribution of counts deviated from a null model. To determine the occurrence of

symptoms of common mental disorders, the percentage of respondents who screened positive for symptoms of common mental disorders and the 95% confidence intervals (using a Poisson distribution) were calculated. To determine the occurrence of symptoms of a possible substance use disorder, the percentage of respondents who screened positive for symptoms of substance use disorders and the 95% confidence intervals (using a Poisson distribution) were calculated. To analyze the relationship between socio-demographic and covid related variables versus a positive screen for symptoms of a possible common mental disorder or substance use disorder, Pearson's chi-squared tests for independence (with Yates' correction, as appropriate) were used to analyze whether these categorical variables between respondents deviated by chance (i.e., a null model). Welch's t-tests were used to analyze variation of continuous data for symptoms of common mental and substance use disorders separately.

Table 5 Sensitivity, specificity, positive and negative likelihood ratios (LR) for the mental illness component of the SAMISS

Cut-point	Sensitivity (%)	Specificity (%)	Correctly classified (%)	LR+	LR-
(≥0)	100.0	0.0	16.6	1.00	
(≥1)	96.6	59.9	66.0	2.41	0.06
(≥2)	84.5	79.5	80.3	4.11	0.20
(≥3)	55.2	92.1	86.0	7.00	0.49
(≥4)	36.2	95.6	85.7	8.13	0.67
(≥5)	20.7	97.3	84.6	7.55	0.82
(≥6)	15.5	99.0	85.1	15.10	0.85
(≥7)	8.6	99.7	84.6	25.17	0.92
(≥8)	1.7	100.0	83.7	0.98	
(>8)	0.0	100.0	83.4	1.00	

Fig 1- Sensitivity, specificity, positive and negative likelihood ratios (LR) for the mental illness component of the SAMISS (Breuer E, Stioff K, Myer L, Seedat S, Stein DJ, Joska JA. The Validity of the Substance Abuse and Mental Illness Symptom Screener (SAMISS) in People Living with HIV/AIDS in Primary HIV Care in Cape Town, South Africa. *AIDS and Behavior* [Internet]. Springer Science and Business Media LLC; 2014 Jan 23;18(6):1133–41. Available from: <http://dx.doi.org/10.1007/s10461-014-0698-y>)

Ethical Considerations

Permission was obtained from the director of VANSa, and ethical approval was obtained from the Human Research Ethics Committee (medical) – clearance number M201032.

Results:

Objective 1:

The mean (SD) age of the respondents was 34.1 (9.4) years. The majority were female, residing in Gauteng, with no dependents, a tertiary qualification, no chronic illnesses, in a relationship, and generating 75 - 100% of their income from their artistic occupation. Most had monthly incomes of less than R 10 000, had previously worked in an art gallery/museum, had not completed an art residency, had more than 10 years' experience in the industry and were employed as freelancers/self-employed (see Table 1)

Table 1 - Sociodemographic Characteristics of 231 members of the Visual Arts Network of South Africa

Variable	Count	Percentage of Sample
Gender		
Female	145	62.8%
Male	70	30.3%
Non-binary	16	6.9%
Province of residence		
Eastern Cape	8	3.5%
Free State	11	4.8%
Gauteng	131	56.7%
Kwazulu-Natal	21	9.1%
Limpopo	4	1.7%
Mpumalanga	6	2.6%
North-West	1	0.4%
Northern Cape	2	0.9%
Western Cape	45	19.5%
Not currently based in South Africa	2	0.9%
Dependents		
1-2	76	33.0%
3-4	41	17.8%
More than 4	11	4.8%
None	102	44.3%
Highest education level		
Secondary Schooling	29	12.6%
Tertiary Qualification	202	87.4%
Chronic illness		
Yes	48	20.9%
No	182	79.1%
Relationship status		
111 a relationship/married	121	52.8%

Other	6	2.6%
Single	95	41.5%
Widowed	1	0.4%
Divorced/Separated	6	2.6%
Percentage income derived from artistic occupation		
<25%	77	33.6%
25-50%	19	8.3%
50-75%	20	8.7%
75-100%	113	49.3%
Role in the visual arts sector		
Academic	21	9.1%
Arts administrator/manager	31	13.4%
Curator	26	11.3%
Other	33	14.3%
Student	14	6.1%
Technical support	3	1.3%
Visual artist	103	44.6%
Monthly income		
<R10 000	105	47.1%
R10 000 - R20 000	60	26.9%
R20 000- R30 000	26	11.7%
>R30 000	32	14.3%
Previously worked in a gallery/museum		
Yes	147	63.6%
No	84	36.4%
Previously been an artist in residency		
Yes	75	32.5%
No	156	67.5%
Years in the visual arts sector		
<1 year	10	4.3%
1 - 5 years	64	27.7%

5-10 years	71	30.7%
>10 years	86	37.2%
Current employment		
Employed outside of the arts sector to sustain my artistic career	41	17.8%
Entrepreneur within the arts sector	27	11.7%
Freelancer within the arts sector	58	25.2%
Permanently employed within the arts sector	48	20.9%
Self-employed within the arts sector	56	24.3%
To what extent do you feel your responses would have been different prior to the effects of the Covid-19 pandemic and subsequent lockdowns?		
My responses would have been very different	54	23.4%
My responses would have been slightly different	106	45.9%
My responses would have been the same	71	30.7%

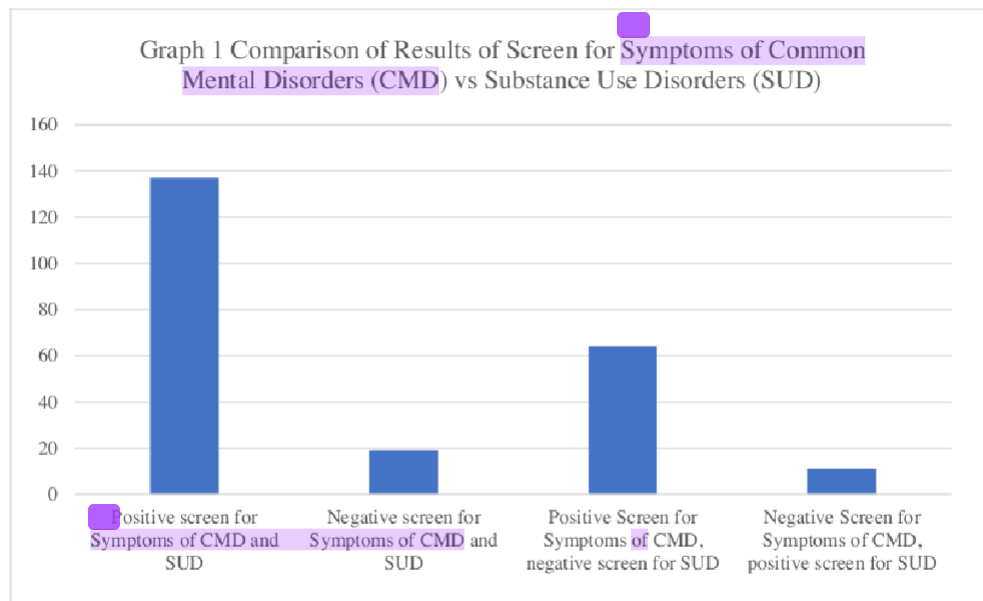
Objective 2:

A positive screen for a possible Common Mental Disorder (depression or anxiety) was found in 87% of the sample (with 75.6% and 99.2% lower and upper 95% confidence intervals respectively).

Objective 3:

A positive screen for a possible ⁵ substance use disorder was found in 64% of the sample (with 54.4% and 74.6% lower and upper 95% confidence intervals respectively).

A comparison was made between respondents ³ who screened positive or negative for symptoms of common mental disorders and those who screened positive or negative for substance use disorders. It was found that a statistically significant correlation exists between screening positive for symptoms of common mental disorders and positive for symptoms of substance use disorders ($\chi^2 = 172.60$, $df = 3$, $p < 0.001$). Most of the respondents, $n = 137$ (59.3%), screened positive for symptoms on both ³ tests. Of the remainder, $n = 19$ (8.3%) screened negative for symptoms on both tests, $n = 64$ (27.7%) screened positive for symptoms of a common mental disorder and negative for symptoms of a substance use disorder and $n = 11$ (4.7%) screened negative for symptoms of a common mental disorder and positive for symptoms of a substance use disorder (see Graph 1)



Objective 4:

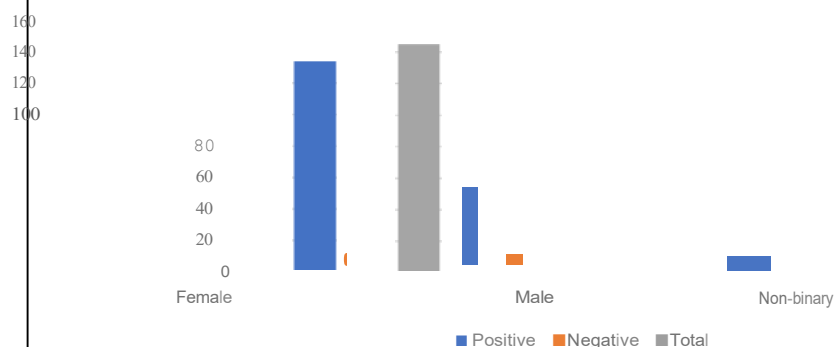
Gender was a significant predictor for whether respondents screened positive or negative for symptoms of common mental disorders (Table 2, Graph 2). A greater percentage of females screened positive for symptoms of common mental disorders, and a greater percentage of males screened negative for these symptoms. Monthly income was a significant predictor of the occurrence of symptoms of a common mental disorder: a greater percentage of respondents earning under R 10 000 per month screened positive for these symptoms (Table 2, Graph 3). None of the other socio-demographic and covid related variables were significant predictors of the occurrence of symptoms of a common mental disorder.

Table 2. The relationship between socio-demographic and covid related variables and outcome of screening test for symptoms of common mental disorders.

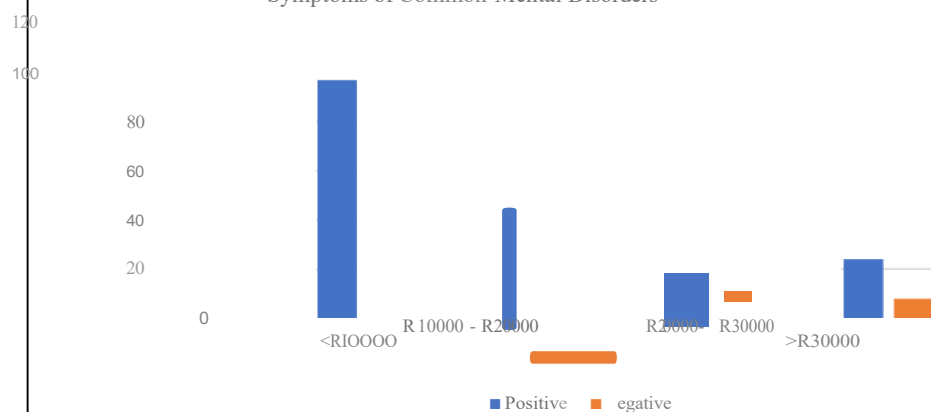
Variable	Positive (n = 201)	Negative (n = 30)	P-values
Age (years)	34.0 (SD = 9.4)	35.7 (SD = 10.3)	p = 0.408
Gender			p = 0.001
Female	134 (66.7%)	11 (36.7%)	
Male	52 (25.9%)	18 (60.0%)	
Non-binary	15 (7.4%)	1 (3.3%)	
Dependents			p = 0.069
1-2	65 (32.5%)	11 (36.7%)	
3-4	35 (17.5%)	6 (20.0%)	
More than 4	7 (3.5%)	4 (13.3%)	
None	93 (46.5%)	9 (30.0%)	
Highest education level			p = 0.455
Secondary Schooling	27 (13.4%)	2 (6.7%)	
Tertiary Qualification	174 (86.6%)	28 (93.3%)	

Chronic illness			p = 0.714
Yes	43 (21.5%)	5 (16.7%)	
No	157 (78.5%)	25 (83.3%)	
Relationship status			p=0.145
In a relationship/married	110 (54.7%)	11 (36.7%)	
Not in a relationship	85 (42.3%)	17 (56.7%)	
Other	6 (3.0%)	2 (6.7%)	
Percentage income derived from artistic occupation			p = 0.623
<25%	65 (32.5%)	12 (41.4%)	
25-50%	17 (8.5%)	2 (6.9%)	
50-75%	19 (9.5%)	1 (3.4%)	
75-100%	99 (49.5%)	14 (48.3%)	
Monthly income			P= 0.026
<R10 000	97 (49.2%)	8 (30.8%)	
R10 000 - R20 000	55 (27.9%)	5 (19.2%)	
R20 000- R30 000	21 (10.7%)	5 (19.2%)	
>R30 000	24 (12.2%)	8 (30.8%)	
Years in the visual arts sector			p = 0.723
<1 year	9 (4.5%)	1 (3.3%)	
1 - 5 years	54 (26.9%)	10 (33.3%)	
5- 10 years	64 (31.8%)	7 (23.4%)	
>10 years	74 (36.8%)	12 (40.0%)	
Current employment			p = 0.965
Employed outside of the arts sector to sustain my artistic career	35 (17.5%)	6 (20.0%)	
Entrepreneur within the arts sector	23 (11.5%)	4 (13.3%)	
Freelancer within the arts sector	51 (25.5%)	7 (23.3%)	
Permanently employed within the arts sector	43 (21.5%)	5 (16.7%)	
Self-employed within the arts sector	48 (24.0%)	8 (26.7%)	
Effects of the COVID-19-19 pandemic and subsequent lockdowns?			p=0.126
My responses would have been very different	95 (37.2%)	11 (36.7%)	
My responses would have been slightly different	49 (24.4%)	5 (16.7%)	
My responses would have been the same	57 (28.4%)	14 (46.6%)	

Graph 2 - Distribution of Gender of Participants who Screened Positive for Symptoms of Common Mental Disorders



Graph 3 - Relationship between monthly income level and Positive or Negative Screen for Symptoms of Common Mental Disorders



None of the socio-demographic and COVID-19-related variables were significant predictors of screening positive or negative for the occurrence of symptoms of a substance use disorder (Table 3).

Table 3. The relationship between socio-demographic and COVID-19 related variables and outcome of screening test for symptoms of substance use disorders

Variable	Positive (n = 148)	Negative (n = 83)	P-Values
Age (years)	33.8 (SD= 9.0)	35.0 (SD= 10.2)	p = 0.343
Gender			p = 0.674
Female	64.20%	50 (80.2%)	

Male	42 (28.4%)	28 (33.7%)	
Non-binary	11 (7.4%)	5 (6.1%)	
Dependents			$p = 0.275$
1-2	50 (34.0%)	26 (31.3%)	
3-4	26 (17.7%)	15 (18.1%)	
More than 4	4 (2.7%)	7 (8.4%)	
None	67 (45.6%)	35 (42.2%)	
Highest education level			$p = 0.655$
Secondary Schooling	17 (11.5%)	12 (14.5%)	
Tertiary Qualification	131 (88.5%)	71 (85.5%)	
Chronic illness			$p = 0.836$
Yes	116 (78.4%)	66 (80.5%)	
No	32 (21.6%)	16 (19.5%)	
Relationship status			$p = 0.573$
In a relationship/married	80 (54.1%)	41 (49.4%)	
Not in a relationship	62 (41.8%)	40 (48.2%)	
Other	6 (4.1%)	2 (2.4%)	
Percentage income derived from artistic occupation			$p = 0.741$
<25%	47 (32.2%)	30 (36.2%)	
25-50%	11 (7.5%)	8 (9.6%)	
50-75%	12 (8.2%)	8 (9.6%)	
75-100%	76 (52.1%)	37 (44.6%)	
Monthly income			$p = 0.781$
<R10 000	67 (46.5%)	38 (48.1%)	
R10 000 - R20 000	37 (25.7%)	23 (29.1%)	
R20 000 - R30 000	19 (13.2%)	7 (8.9%)	
>R30 000	21 (14.6%)	11 (13.9%)	
Years in the visual arts sector			$p = 0.723$
<1 year	6 (4.1%)	4 (4.8%)	
1 - 5 years	39 (26.4%)	25 (30.1%)	
5-10 years	49 (33.1%)	22 (26.5%)	
>10 years	54 (36.4%)	32 (38.6%)	
Current employment			$p = 0.194$
Employed outside of the arts sector to sustain my artistic career	28 (18.9%)	13 (15.9%)	
Entrepreneur within the arts sector	15 (10.1%)	12 (14.6%)	
Freelancer within the arts sector	33 (22.3%)	25 (30.5%)	
Permanently employed within the arts sector	37 (25.0%)	11 (13.4%)	
Self-employed within the arts sector	35 (23.7%)	21 (25.6%)	
Effects of the COVID-19-19 pandemic and subsequent lockdowns?			$p = 0.986$
My responses would have been very different	35 (23.7%)	19 (22.9%)	
My responses would have been slightly different	68 (45.9%)	38 (45.8%)	
My responses would have been the same	45 (30.4%)	26 (31.3%)	

Discussion

Key Findings

The study found a high occurrence of symptoms of common mental disorders and substance use disorders amongst a sample of visual artists in South Africa (87% and 64% respectively). A significant correlation existed between a positive screen for symptoms of common mental disorders and a positive screen for symptoms of substance use disorders. Demographics significantly associated with a positive screen for symptoms of common mental disorders were gender (female) and monthly income <R10000. No demographic variables were associated with a positive screen for symptoms of substance use disorders. Most respondents indicated that their responses would have been slightly different prior to the Covid-19 pandemic.

Objective 1

Compared to the female predominance of 51% in the South African population, [23], this study had a larger majority of 62,8% female participants. Most participants were from Gauteng (with the highest population density in South Africa [23]). The mean age of participants was 34,1, compared to the 20-29 years into which most South Africans (above the age of 18 years) fall [23]. The vast majority of South Africans (81,5%) have a primary school education [23], compared to the participants in this study who predominantly had a tertiary qualification (this is most likely because participants, all members of VANSAs, obtained a qualification in visual arts to pursue a career in this sector). The average monthly income of employed South Africans was estimated at R23 502 in March 2022 [23]. Most participants fell into the income range of >R10000 per month (52,9%). It is difficult to generalize the socioeconomic status of the selected sample to the population of South Africa as a whole, due to the vast inequities that exist within South African society.

Our sample was compared to those of other South African studies that made use of the SAMISS. A study by Breuer et al consisted of mostly female participants between 30-39 years [24]. However, most were unemployed and had a secondary (not tertiary) level of education. This is possibly because theirs was a community sample, whereas our study comprised of people working within the visual arts sector (more likely to be employed and to have possibly studied visual arts at a tertiary level). The original validation study of the SAMISS consisted of participants between the ages of 30-39 [21]. Most participants were male, had a high school diploma, and were classified as 'unable to work'. Again, this study drew from a community sample attending a local clinic. A significant difference between this study and the other two is that the HIV status of our study population was unknown.

Objective 2

There exists a broadly held notion of a link between creativity and psychopathology, but empirical evidence is limited and subject to methodological flaws [25]. Despite increasing the cut-off score for the mental illness component, the occurrence of symptoms of common mental disorders as detected by the SAMISS (87%) remains high. Reasons could be the SAMISS's poor specificity and case over detection, [22], as well as lack of validation of the SAMISS in a population with undetermined HIV status.

Only 30% of respondents reported that their answers would have been identical prior to the Covid-19 pandemic and lockdowns. In lower- and middle-income countries, these events increased general psychological distress [26]. Additionally, the economic and social effects of lockdown measures in countries with high unemployment rates and in which most of the population works within the informal sector (such as South Africa) [27], would have significantly affected visual artists.

No studies in visual artists utilizing the SAMISS could be retrieved. However, studies investigating psychopathology in visual artists that utilized other data collection tools revealed a positive association [10,11,12].

Comparing our findings to other studies utilizing the SAMISS yields mixed results. Its original North Carolina-based validation study found that 69.2% of 148 participants screened positive for symptoms of mental illness [20]. The participants were exclusively HIV positive, and the study was comprised of researcher-administered interviews. This, as well as its first world setting, make a direct comparison difficult. The combined occurrence of symptoms of both common mental disorders and substance use disorders in our study was 59.3%, compared to their 21% [20]. Possible reasons for the higher occurrence of symptoms in our study may include the unstudied sensitivity and specificity of the SAMISS in a population with unknown HIV status, recruitment bias (study participants who opted in knew that the survey was about mental health difficulties) and increased socio-economic difficulties in South Africa. Despite these factors, it must however be considered that the higher occurrence of symptoms may be due to the participants' visual artistic occupation.

The most comparable study was performed at a Cape Town clinic [24] and found that using the SAMISS, of 269 HIV positive patients on HAART, 43% screened positive for symptoms of a common mental disorder. Their sample is comparable to our sample as the respondents resided in South Africa, most were female and between the ages of 30 – 39. However, most were unemployed and had a secondary level education. One would expect the sample group with higher unemployment and lower education level to have an increased prevalence of symptoms of mental illness. Therefore, the higher positive screen of symptoms of mental illness in our study (87%) must be critically analyzed and the lack of studies regarding the validity of the SAMISS in a population whose HIV status is unknown and recruitment bias in our study (prospective participants who received the email from VANSa chose to participate with the knowledge that the survey pertained to mental health difficulties) should be considered.

Objective 3

The high occurrence of symptoms of substance use disorders of 64% is consistent with findings of international studies. The association between substance use and creativity has been explored in biographical landmark studies of creative individuals and reported through systematic review [6,8,14].

The most directly comparable study population is found in the University of Hungary study [11]. Structured questionnaires were administered to 130 art students and 698 controls [11]. Researchers found that being an art student might be a risk factor for early onset of substance use and number of different types of substances used. However, because this study focused on younger artists (students) confounding may be present – those using substances are more likely to study visual arts or those using substances prior to tertiary education may have lower university entrance marks, restricting their degree choice. Another limitation is the reliance on self-report and self-selection bias. Its first world setting limits its generalizability.

The original validation study of the SAMISS found a screening prevalence of symptoms of substance use disorders of 37.2% [21]. The sensitivity and specificity of the substance use disorders component of the SAMISS has been showed to be superior to the mental illness part, but its lack of validation in a mixed HIV population brings the accurate detection of cases into question [20]. The sample population

of a study based at a primary health care clinic in Cape Town which found an occurrence of symptoms of substance use disorders of 20% is comparable to our study in that participants were also based in South Africa, predominantly female and aged between 30-39. A larger number of participants however were unemployed and did not have a tertiary education. Unemployment results in higher rates of substance use [27]. Since our study had lower unemployment rates, higher occurrence of symptoms of substance use disorders is therefore likely due to another factor, such as visual artistic occupation.

Objective 4

There is limited information regarding the prevalence of common mental disorders in South Africa. Fewer than 10% of those needing mental health intervention eventually access it [28]. The South African Stress and Health Survey made use of the Composite International Diagnostic Interview [18], a gold standard diagnostic test for DSM-IV disorders, in contrast to our study, which screened for the occurrence of symptoms of common mental disorders. Despite this, the findings of the SASH remain useful as they reflect general trends within South Africa's population. The SASH found female gender to be associated with increased prevalence of mood and anxiety disorders [18], consistent with our finding that gender is a significant predictor of a positive screen for symptoms of mental illness. The World Health Organization's report on gender in mental health research found that women are more likely to suffer from common mental disorders than men [29] South African studies have found a preponderance of female mental health users [30,31]. Reasons include risk factors for poor mental health, which are also more likely to occur in women, such as poor socio-economic circumstances, intimate partner violence and exposure to men with substance abuse problems [32].

The SASH found that higher income was associated with increased prevalence of common mental disorders, whereas our study reflects an association with lower income (<R10 000 monthly). Households with lower incomes are more likely to be subject to food insecurity or food insufficiency [33]. A significant association exists between food insufficiency and having a lifetime diagnosis of an anxiety disorder [33]. Thus, lower income may result in increased prevalence of mental disorders due to possible nutritional consequences of food insufficiency, and increased psychological distress caused by financial strain [33]. Attention must be paid to the possibility of the presence of common mental disorders resulting in decreased income [34].

No demographic variables related significantly to higher occurrence of symptoms of substance use disorders in this study, which contrasts to most studies which have found a significant association with male gender [35]. Demographic variables typically related to higher substance use among artists include male gender and younger age [15].

Strengths and Limitations

The high sensitivity and only moderate specificity of the SAMISS tool, results in possible inflation of the occurrence of symptoms of both common mental disorders and substance use disorders. Ideally, a diagnostic tool should be administered to participants who screen positive on the SAMISS or any other screening tool in order to establish the prevalence of disorders, not only the occurrence of symptoms. However, the SAMISS's high sensitivity makes it a useful and universal first-line screening tool [22]. An additional limitation is bias due to the SAMISS tool not yet being validated in an unknown HIV-status sample.

Conclusion

There is a high occurrence of symptoms of ⁵common mental disorders (87%) and substance use disorders (64%) in a sample of members belonging to the Visual Artists Network of South Africa with a significant association between female gender and lower income level (<R10 000) and symptoms of common mental disorders.

Implications and Recommendations

No research has been conducted into common mental disorders or substance use ⁵disorders in South African visual artists and this study is the first of its kind. Our findings suggest that further research is warranted. It also highlights the need to strengthen access to mental health support by increasing government funding of organizations such as VANSAs.

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Competing Interests

The authors declare that there are no financial or personal relationships that may have inappropriately influenced them in compiling this research.

Authors' Contributions

All authors contributed to the research design. A.S. and R.T. conceptualized and developed the first draft, collected and analyzed data and interpreted results. All authors reviewed, revised and approved the final draft.

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Data Availability

The relevant data is available from the corresponding author, A.S. on reasonable request.

Disclaimer

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Title: The article's full title should contain a maximum of 95 characters (including spaces).

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