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THE RELATIONSHIP OF PSYCHOLOGICAL AND PHYSICAL IMPACTS ON DRUG ABUSE TO ORAL AND DENTAL HYGIENE

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ABSTRACT
Background: *Drug usage can have a negative psychological and physical influence on dental hygiene. Drug abusers' low priority for oral and dental health is linked to behavioral changes, needle phobia, and dread of the dentist, all of which are part of the psychological impact of drug usage. Poor dental and oral hygiene in drug users can be attributed to reduced motor function, which is part of the physical side effects of drug use.* ***Objective****: To analyze the psychological and physical impact of drug abuse on oral hygiene at IPWL Griya Pemberdayaan Banjarbaru city.* ***Methods****: Using an analytic observational study using a cross-sectional method and a basic random sample strategy. The population of drug users in the IPWL Griya Pemberdayaan Banjarbaru city was 50 persons, and a sample of 38 people was acquired. The WHOQOL-Bref questionnaire was utilized in this study to assess the psychological and physical effects of drug misuse, as well as the OHI-S index criteria to assess dental and oral hygiene status, which were then analyzed using the Spearman test.* ***Results****: The Spearman test showed that there is a relationship between the psychological impact of drug abuse on oral hygiene with a strong weak correlation, and there is a relationship between the physical impact of drug abuse on oral hygiene with a fairly strong correlation.* ***Conclusion****: it is necessary to improve dental and oral hygiene to reduce the psychological and physical impact of drug abuse.*

Keywords : *Drugs, Oral Hygiene, Psychological, Physical*
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INTRODUCTION

Narcotics, also known as NAPZA, or narcotics, psychotropics, and other addictive substances, are materials, chemicals, and medications that, when ingested, impact the body, particularly the brain and the human central nervous system.[1] However, many people have been abusing it recently, interfering with medicine doses and causing dependence.[2] According to data from the United Nations Office on Drugs and Crime (UNODC), global drug misuse reached 5% in 2013 and rose by 5.6% in 2017.[3,4] According to data from the National Narcotics Agency (BNN), the prevalence rate of drug abuse in Indonesia in 2019 was 3,419,188 out of 186,616,874 individuals, while in South Kalimantan, the prevalence rate of drug abuse reached 79,370 in 2019.[5] According to BNN South Kalimantan Province data in 2020, the city of Banjarbaru ranks first with a proportion of 26.64%, followed by the city of Banjarmasin with 20.72% and the Balangan district with 15.78% of total drug abusers.

Drug misuse can result in psychological, physical, and social functioning issues.[6] In drug misuse, these three aspects interact and are interconnected.[7] ental and oral disorders in drug users are caused in part by a lack of self-care.[8] . According to studies in India, only 36% of drug addicts see the dentist within a year, and a study in the Netherlands found that only 18% of people brushed their teeth less than once a day.[9] The low

importance of dental and oral hygiene in drug addicts is related to the demand for drugs, fear of dentists, needle phobia, and the drug addict's lifestyle, which results in poor utilization of dental health services teeth and mouth.[8] While brushing their teeth in this drug trap arises due to changes in behavior and mood that drive them to disregard dental and oral hygiene.[9] This is one of the psychological effects of drug usage.

One of the physical consequences of drug addiction is poor dental and oral hygiene, which is caused by reduced motor function. According to the findings of a Chinese study, 96.63% of drug users had poor dental and oral hygiene.[3] Poor dental and oral hygiene in drug users is caused by reduced motor function, which makes cleaning their oral cavity difficult, resulting in plaque accumulation.[3]

Plaque and calculus buildup might reveal a person's degree of oral and dental hygiene.[10] The Simplified Oral cleanliness Index (OHI-S) is an indicator that can be used to assess a person's degree of dental and oral cleanliness.[11] The OHI-S index is a measure of a person's oral hygiene that is calculated by adding the Debris Index Simplified (DI-S) and the Calculus Index Simplified (CI-S).[10,12] The OHI-S index is considered good if it has a score of 0.0 - 1.2, intermediate if it has a score of 1.3 - 3.0, and terrible if it has a score of 3.1 - 6.0.[11]

Because of the high percentage of drug usage, a rehabilitation facility is required. The Griya Empowerment Compulsory Report Recipient Institution (IPWL) is one of the rehabilitation centers in Banjarbaru. Institutional Report Recipient (IPWL) Griya Empowerment is a community-owned institution that has been selected by the Republic of Indonesia's Ministry of Social Affairs to provide social rehabilitation for drug addicts in the province of South Kalimantan. A preliminary assessment of drug abusers at IPWL Griya Pemberdayaan Banjarbaru city done by researchers in September 2022 revealed that 80% of drug abusers had low dental and oral hygiene rates. Drug users have a 3.32 average dental and oral hygiene. Based on the description of the problem, the author decided to undertake study at IPWL Griya Pemberdayaan in Banjarbaru on the relationship between the psychological and physical effects of drug addiction on dental hygiene.

METHODS

The Faculty of Dentistry, University of Lambung Mangkurat, granted ethical permission for this study, No.064/KEPKG-FKGULM/EC/IV/2023. This study is an analytic observational study using a cross sectional research design. The purpose of this research is to investigate the relationship between the psychological and physical effects of drug misuse on oral hygiene in drug users at IPWL Griya Pemberdayaan in Banjarbaru. The participants in this study were 50 drug addicts undertaking social rehabilitation at the Griya Pemberdayaan IPWL in the city of Banjarbaru. The sampling technique employed in this study was simple random sampling with a cross sectional formula, and the number of samples was corrected by forecasting 10% of the sample falling out, yielding 38 samples.

This study included drug users with teeth that met the OHI-S requirements, particularly teeth 16, 11, 26, 36, 31, and 46. If the first molars are missing, they might be replaced by second or third molars. If the maxillary central incisor on the right is missing, the maxillary central incisor on the left can be used in its place. If the left mandibular central incisor is missing, a right mandibular central incisor might be used in its place. There is no assessment of that segment if there are no replacement teeth, and an assessment can be done if there are at least two index teeth that can be checked. Additionally, drug addicts who are willing to be cooperative respondents and sign informed consent. Drug addicts who have been in the IPWL Griya Pemberdayaan in Banjarbaru for at least 7 days and have completed the isolation stage.

The WHOQOL-Bref questionnaire, which included six questions on a Likert scale containing positive and negative statements, was used to assess the psychological impact of drug users. Positive remarks are given a score of 5 if the amount is excessive, a score of 4 if it occurs frequently, a score of 3 if it occurs moderately, a score of 2 if it occurs infrequently, and a score of 1 if it occurs never. Negative assertions, on the other hand, are given a score of 5 if they occur infrequently, a score of 4 if they occur infrequently, a score of 3 if they occur in moderate numbers, a score of 2 if they occur frequently, and a score of 1 if they occur frequently. Then, for each score, measurement criteria are applied to establish the low category if the score is ≥18 and the high category if the score is <17.

The physical impact of drug users was assessed using the WHOQOL-Bref questionnaire, which consisted of 7 questions on a Likert scale with positive and negative comments. Positive remarks are given a score of 5 if the amount is excessive, a score of 4 if it occurs frequently, a score of 3 if it occurs moderately, a score of 2 if it occurs infrequently, and a score of 1 if it occurs never. Negative assertions, on the other hand, are given a score of 5 if they occur infrequently, a score of 4 if they occur infrequently, a score of 3 if they occur in moderate numbers, a score of 2 if they occur frequently, and a score of 1 if they occur frequently. Then, for each score, measurement criteria are applied to identify the low category if the score is ≥21 and the high category if the score is <20.

The oral hygiene of drug users is assessed directly using a measuring equipment, specifically a mouth mirror, WHO probe, and the dental and oral hygiene form or OHI-S, which is calculated by adding the DI-S and CI-S. The DI-S examination was performed by inserting the WHO probe on the tooth surface in the incisal or occlusal third of the tooth and advancing it

towards the cervical third. The WHO probe was used to assess the CI-S by inserting it on the distogingival cervix and pushing it towards the subgingival area. Furthermore, the results of the DI-S and CI-S assessments are combined to provide an OHI-S index score, which is classified as excellent if it is 0-1.2, moderate if it is 1.3-3.0, and terrible if it is 3.1-6.0.

The study began with an explanation in order to obtain the respondent's assent via an informed consent sheet signed by the respondent. Following that, the respondents' oral and dental hygiene level was assessed. Following that, respondents were asked to complete a questionnaire sheet.

The data from this study were then statistically tested using the SPSS application tool. The Spearman correlation test was used to evaluate variables and hypotheses to see if and how strong a relationship exists between the psychological and physical repercussions of drug consumption and the success of maintaining oral cleanliness.

RESULTS

This study included 38 drug abuse respondents from the Empowerment Griya IPWL in Banjarbaru. Table 1.1 shows the characteristics of the respondents.

Table 1.1 Characteristics of Respondents

Variable	N	%
Gender		
Man	27	71%
Women	11	29%
Ages		
17-25	27	71%
26-35	11	29%
Occupation		
Private Employees	15	39%
Labor	3	8%
Housewife	8	21%
Student	6	16%
Unemployed	6	16%
Last education		
Junior High School	12	31%
Senior High School	25	66%
College	1	3%
Drug Used		
Methamphetamine	20	53%
Fox Glue	11	29%
Zenith	7	18%
Total	38	100%

The majority of respondents based on gender were male with a total of 27 respondents (71%). Characteristics based on age category were mostly in the 17-25 year age category with 27 respondents (71%). Characteristics of respondents based on work with the majority of respondents working as private employees as many as 15 respondents (39%). Characteristics of respondents based on their last education, most of them had high school education as many as 25 respondents (66%). Characteristics of respondents based on the type of drug used, the majority of respondents consumed methamphetamine as many as 20 respondents (53%).

Table 1.2 Status of Dental and Oral Hygiene of Drug Abusers

Status of Dental and Oral Hygiene	N	%
Good	4	11
Moderate	10	26
Poor	24	63
Total	38	100%

The results of the study on the status of dental and oral hygiene among drug abusers at IPWL Griya Pemdayaan in the city of Banjarbaru found that 24 respondents (63%) had poor dental and oral hygiene. In the second rank, namely drug abusers with moderate dental and oral hygiene, as many as 10 respondents (26%) and as many as 4 respondents (11%) were in the good category.

Table 1.3 Respondent Data Based on the Psychological Impact of Drug Abuse

Psychological Impact	N	%
High	21	55%
Low	17	45%
Total	38	100%

The psychological impact on drug abusers at IPWL Griya Pemberdayaan in the city of Banjarbaru has the highest psychological impact, namely 21 respondents (55%). Meanwhile, drug abusers who have a low psychological impact are 17 respondents (45%).

Table 1.4 Respondent Data Based on the Physical Impact of Drug Abuse

Physical Impact	N	%
High	20	53%
Low	18	47 %
Total	38	100%

The results of research on drug abusers at IPWL Griya Pemberdayaan in the city of Banjarbaru showed that 20 respondents (53%) had a high physical impact. Drug abusers in IPWL Griya Pemberdayaan Banjarbaru city with a low physical impact of 18 people (47%).

Table 1.5 The Relationship between the Psychological Impact of Drug Abuse on Dental and Oral Hygiene

Variable		Dental and Oral Hygiene			Sig
		Good	Moderate	Poor	
Psychological Impact	**High**	0 (0%)	5 (50%)	16 (67%)	0,031
	Low	4 (100%)	5 (50%)	8 (33%)	
Total		4 (100%)	10 (100%)	24 (100%)	

The results of the psychological impact on dental and oral hygiene analysis revealed that drug abusers with poor dental and oral hygiene status had a high psychological impact on as many as 16 respondents (67%), whereas drug abusers with good dental and oral hygiene status had a low psychological impact. The Spearman test results show a significance of 0.031 (p

0.05) and a correlation coefficient of 0.350, indicating a relationship between the psychological impact on dental and oral hygiene with a weak correlation strength.

Table 1.6 The Relationship between the Physical Impact of Drug Abuse on Dental and Oral Hygiene

Variable		Dental and Oral Hygiene			Sig
		Good	Moderate	Poor	
Physical Impact	High	0 (0%)	4 (40%)	16 (67%)	0,012
	Low	4 (100%)	6 (60%)	8 (33%)	
Total		4 (100%)	10 (100%)	24 (100%)	

Drug abusers with bad dental and oral hygiene status are most frequently found in drug abusers with a high physical impact, namely 16 respondents (67%), whereas drug abusers with good dental and oral hygiene status are found in drug abusers with a negative impact, namely 7 respondents (3%). poor physique. The Spearman test analysis yielded a significant value of 0.012 (p 0.05) and a correlation coefficient value of 0.405, indicating that there is a very strong link between physical impact on dental and oral hygiene.

DISCUSSION

Researchers' findings on dental and oral hygiene among drug abusers at IPWL Griya Pemberdayaan Banjarbaru city show that they have low dental and oral hygiene status, with an average OHI-S score of 3.4. Verianti's research at the Kayuagung Penitentiary in 2020 discovered that the oral hygiene status of drug addicts was largely poor, with 55.8% having poor oral hygiene.[3] The findings of this study were also consistent with Arora's 2019 research, which found that drug addicts in Amritsar District, India, have poor dental hygiene.[13] The high rate of poor dental and oral hygiene in drug users is related to their inadequate method of maintaining dental and oral hygiene, also the majority of drug users smoke and rarely or never attend dental health facilities.[14,15]

The findings of study undertaken at IPWL Griya Empowerment on the psychological influence on drug addicts are largely positive. This strong psychological impact could be attributed to the type of drug used and the length of abuse. This is consistent with Syukri's 2019 research, which found that the type of substance and duration of use had a strong relationship to the impact of drug abuse.[16] Narcotics and psychotropic medicines can hasten the deterioration of the neurological system, especially if used for an extended period of time.[16] This is also consistent with Jan and colleagues' 2020 research, which found a link between a lack of interest in daily activities and the frequency of methamphetamine use.[17]

Drug addicts at IPWL Griya Empowerment in Banjarbaru have the greatest physical impact. The long duration of drug usage may contribute to the severe physical impact of drug abuse. Researchers discovered that respondents had taken drugs for an average of one to three years, resulting in significant physical consequences for drug users. This is consistent with Jan and colleagues' 2020 study, which found that long-term methamphetamine use can result in more serious bodily damage.[17]

The psychological influence of drug abusers on dental and oral hygiene at IPWL Griya Pemberdayaan Drug users in Banjarbaru who have poor teeth and oral hygiene have the greatest psychological impact. The Spearman test results reveal that there is a relationship between the psychological impact on dental hygiene with a modest correlation strength.

The psychological consequences of drug misuse will have an effect on dental hygiene. Drug users are more prone to be careless or careless and apathetic to the state of their bodies.[8] In addition, reduced activity in brushing their teeth among drug users happens owing to changes in behavior and mood that cause them to disregard oral hygiene.[9] According to Shekarchizadeh, issues with the teeth and mouth caused by drug misuse are partly caused by neglecting self-care.[8] This is also corroborated by Auktakalnis' 2018 research, which found that the majority of drug users have unhealthy lifestyles that contribute to the development of dental and oral disorders.[18] More than half of methamphetamine users do not visit the dentist on a regular basis or do not visit at all.[18] This is because some drug users are frightened or ashamed to attend the dentist, while others believe it is unnecessary.[18]

Drug abusers with poor dental and oral hygiene status are primarily found in high-impact drug users, whereas drug abusers with good dental and oral hygiene status are mostly found in low-impact drug users. The Spearman test analysis results demonstrate a relationship between physical impact and dental hygiene with a very good correlation strength.

One of the physical symptoms of drug misuse caused by reduced motor function is poor teeth and oral hygiene in drug users. The National Narcotics Agency of the Republic of Indonesia discovered in 2019 that methamphetamine-type substance misuse can induce impaired motor function.[19] Motor function disruption in drug users is produced by an increase of dopamine in the brain and body, which affects motor function.[19] According to the findings of Verianti's research in 2019 2020, 97.6% of drug users have poor oral and dental hygiene.[3] Poor dental and oral hygiene in drug users is caused by reduced motor function, which makes cleaning their oral cavity difficult, resulting in plaque accumulation.[8] According to the findings of a study on the psychological and physical effects of drug abuse on oral hygiene at IPWL Griya Pemberdayaan in Banjarbaru, the psychological impact on drug abusers at IPWL Griya Pemberdayaan in Banjarbaru has the greatest psychological and physical impact. In addition to drug abusers at IPWL Griya Pemberdayaan in Banjarbaru city, the majority of them have poor dental

and oral hygiene. The results of the Spearman test revealed a relationship between the psychological impact on dental and oral hygiene with a weak correlation strength and a relationship between the physical impact on dental and oral hygiene with a strong correlation.

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