



## Review of ICD-10 Differences Chapter 5 Mental and Behavioral Disorders with DSM-5

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**Abstract.** ICD-10 Chapter 5 "Mental and Behavioral Disorders" is used to record the diagnoses of all patients seen in psychiatric treatment. The DSM-5 is the standard classification of mental disorders used by mental health professionals in the United States. The differences in determining the diagnosis code in ICD-10 Chapter 5 Mental and Behavioral Disorders and DSM-5 can be influenced by the basic structure coding rules that follow in both classification systems. The purpose of this study was to determine the differences in the basic structure of ICD-10 Chapter 5 Mental and Behavioral Disorders with DSM-5. This research design uses *literature review*. The results of this study show that there are differences, among others, in the definition of the terms *include* and *exclude* in ICD-10 and DSM-5. Koder must improve the ability to understand definitions in the process of determining the codification of the two classification systems.

**Keywords:** DSM-5, Behavioral mental disorders, ICD-10, Differences

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### INTRODUCTION

*The International Statistical Classification of Diseases and Related Health Problems* (ICD) is the basis for the identification of global health trends and statistics, and the international standard for reporting diseases and health conditions. ICD-10 was published in May 1990 by 43 World Health Councils. ICDs can provide critical knowledge about the rates, causes and consequences of human disease and death worldwide through data reported and encoded with ICDs (WHO, 2023). In Indonesia, ICD-10 is used for the diagnosis coding system in determining claims on INA-DRG (*Indonesia Diagnosis Related Group*) (Permenkes RI, 2014). The purpose of the ICD allows systematic record-keeping analysis, interpretation, comparison of morbidity and mortality data in different countries or regions at different times. ICDs are also used to translate diagnosis of diseases and other health problems from words into alphanumeric codes that can facilitate data storage, retrieval and analysis (WHO, 2016). In addition to the ICD, it is also known as *The Diagnostic and Statistical Manual* (DSM) which is a handbook used by health professionals in the United States and most countries as an authority guide for the

diagnosis of mental disorders. The DSM contains descriptions, symptoms and other criteria for diagnosing mental disorders (APA, 2013).

DSM-5 and ICD should be considered companion publications. The DSM-5 contains the most up-to-date criteria for diagnosing mental disorders. The ICD contains the code numbers used in the DSM-5 that are required for insurance use and monitoring morbidity and mortality statistics. The APA (*American Psychiatric Association's*) work closely with staff from the WHO (*World Health Organization*) to ensure that both systems are maximally compatible (APA, 2023).

Diseases associated with psychiatric disorders in ICD-10 are in Chapter 5 "Mental and Behavioral Disorders". This classification is used to record the diagnoses of all patients seen in psychiatric care worldwide. While DSM is an official classification in the United States for clinical diagnosis but is also used in several other countries (Tyrer, 2014). The results of research by Andreas Lundin, Mats Hallgren, Mikael Forsman and Yvonne Forsell (2014), adopted the DSM-5 AUD (*Alcohol Use Disorder*) criteria to include more individuals with less severe disorders than when using DSM-III, DSM-IV, or ICD-10. In addition, severe AUD will only include individuals who have previously been or are currently diagnosed with dependency (Lundin A, 2015).

The differences in determining the diagnosis code in ICD-10 Chapter 5 Mental and Behavioral Disorders and the DSM-5 can be influenced by the basic structure coding rules that follow in both classification systems. So the purpose of this study is to determine the differences in the basic structure of ICD-10 Chapter 5 Mental and Behavioral Disorders and DSM-5.

## LITERATURE

*The Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) is the standard classification of mental disorders used by mental health professionals in the United States. The DSM-5 is the result of more than 10 years of effort by hundreds of international experts in all aspects of mental health. Their dedication and hard work have resulted in a volume of authority defining and classifying mental disorders to improve diagnosis, treatment, and research (APA, 2023).

## METHOD

The design in this study used *literature review*. Comparisons were made to the ICD-10 Chapter 5 Mental and Behavioral Disorders and DSM-5 books. This *literature review* research

uses international journals and reference books related to the comparison of ICD-10 and DSM-5 and has been selected according to inclusion and exclusion criteria.

## DISCUSSION

There is a difference between the ICD-10 and the DSM-5. The differences between the two classifications are comprehensively found in table 1.

**Table 1. Table of contents**

No	Variabel	ICD-10 Chapter 5 Mental and Behavioral Disorders	DSM-5
1.	<i>Include</i>	The term <i>include</i> in ICD-10 is found in several code explanations	There is no include in the DSM-5, but the term " <i>Specify if</i> " is found which has the same meaning as <i>include</i> in ICD-10
2.	<i>Exclude</i>	The term <i>exclude</i> in ICD-10 is contained in several code explanations	There is no exclude term in the DSM-5, but the term " <i>differential diagnosis</i> " is found which has the same meaning as <i>exclude</i>
3.	Category blocks	The chapter is grouped in 11 category blocks	Pada DSM-5 terdapat 22 blok kategori
4.	Asterisk dagger	There are 2 asterisk codes and 27 dagger codes	Tidak terdapat kode asterisk dagger
5.	Glosarium	Glosarium in ICD-10 terdapat pada Beginning of Category Block and Sub Category of Each Code	Glosarium pada DSM-5 ditemukan pada deskripsi Initial explanation of category blocks and each code divided into categories
6.	Code writing	F10 Mental and behavioral disorders resulting from alcohol use Use the 4th character 1. .0 Acute poisoning 2. .1 Malicious use 3. .2 Dependency syndrome 4. .3 Withdrawal circumstances 5. .4 State of withdrawal with delirium 6. .5 Psychotic disorders 7. .6 Amnestic syndrome 8. .7 Late-onset residual and psychotic disorders 9. .8 Other mental and behavioral disorders - .9 Nonspecific mental and behavioral disorders	F10 Alcohol use disorder 1. F10.10 Lightweight 2. F10.20 Medium - F10.20 Severe
		F23.2 Acute schizophrenia, psychotic disorder Schizophreniform brief	1. F23 Brief psychotic disorder - F20.81 Schizophreniform disorder

Source: Results of the researcher's analysis

From table 1 can be found a comprehensive breakdown of differences between ICD 10 Chapter 5 Mental and Behavioral Disorders and DSM-5, namely:

1. Include

The include notes in ICD-10 are located under glossary descriptions in several subcategories of diagnosis codes. While in the DSM-5 the term include is not found specifically. Based on the researchers' analysis, in the DSM-5 there is the term "Specify if" which has the same meaning as the term include. The specify if note is located in the explanation of the glossary of diagnostic criteria. The use of include and specify if records only applies to each code or block, different diagnosis codes, so the accompanying include and specify if records are different.

2. Exclude

The exclude note in ICD-10 is located under the glossary description in several subcategories of diagnosis codes and under the include note. While in the DSM-5 the term exclude is not found specifically. Based on the researcher's analysis, in the DSM-5 there is the term "Differential Diagnosis" as a differential diagnosis and has the same meaning as the term exclude. Note differential diagnosis is located in the explanation of the glossary of each diagnosis code. The use of exclude and differential diagnosis records only applies to each code or block, different diagnosis codes, so the exclude and differential diagnosis records that accompany them are different.

3. Category blocks

In ICD-10 this chapter is grouped into 11 blocks, namely:

1. F00-F09 Organic mental disorders including symptomatic
2. F10-F19 Mental and behavioral disorders resulting from the use of psychoactive substances
3. F20-F29 Schizophrenia, schizotypal disorder and delusions
4. F30-F39 Mood disorders [affective]
5. F40-F48 Neurotic, stress-related and somatoform disorders
6. F50-F59 Behavioral syndromes related to physiological disorders and physical factors
7. F60-F69 Personality and behavioral disorders in adults
8. F70-F79 Mental retardation
9. F80-F89 Disorders of psychological development

10.F90-F98 Behavioral and emotional disorders that usually arise during childhood and adulthood

11.F99 Nonspecific mental disorders

In the DSM-5 there are 22 blocks, namely:

1. Neurodevelopmental disorders
2. Schizophrenia spectrum and other psychotic disorders
3. Bipolar and related disorders
4. Depressive disorders
5. Anxiety disorders
6. Obsessive compulsive disorder and related disorders
7. Trauma and stressor-related disorders
8. Dissociative disorders
9. Somatic symptoms and associated disorders
10. Eating disorders
11. Elimination disorders
12. Sleep disorders
13. Sexual dysfunction
14. Gender dysphoria
15. Impaired impulse and behavioral control
16. Substance-related and addictive disorders
17. Cognitive neurodisorders
18. Personality disorders
19. Paraphilic disorders
20. Other mental disorders
21. Drug-induced movement disorders and other drug side effects
22. Other conditions that may be the focus of clinical attention

Based on the researchers' analysis, the category blocks in ICD-10 and DSM-5 have categories for the diagnosis of the same mental and behavioral disorders, but are only classified in different blocks. 1 Block categories in ICD-10 can be split into blocks in DSM-5. For example, block categories in the DSM-5 include:

1. Eating disorders
2. Sleep disorders

3. Sexual dysfunction disorders

It is contained in the 1 block category "Behavioral syndromes related to physiological disorders and physical factors" in ICD-10.

1. Asterisk Dagger

In ICD-10 there are 2 asterisk codes and 27 dagger codes, namely:

1. Asterisk:

1. F00\* Dementia in Alzheimer's disease
2. F02\* Dementia in other diseases classified elsewhere

3. Dagger :

1. G30.-† Dementia in Alzheimer's disease
2. G30.0† Dementia in early-onset Alzheimer's disease
3. G30.1† Dementia in late-onset Alzheimer's disease
4. G30.8† Dementia in Alzheimer's disease, nontypical or mixed type
5. G30.9† Dementia in Alzheimer's disease, nonspecific
6. G31.0† Dementia in pick disease
7. A81.0† Dementia in creutzfeldt-jakob disease
8. G10† Dementia in Huntington's disease
9. G20† Dementia in Parkinson's disease
10. B22.0† Dementia in the HIV virus
11. E75.-† Dementia in brain lipidosis
12. G40.-† Dementia in epilepsy
13. E83.0† Dementia in hepatolenticular degeneration
14. E83.5† Dementia in hypercalcemia
15. E01.-†, E03.-† Dementia in hypothyroid, aquired
16. T36-T65† Dementia in poisoning
17. G31.8† Dementia in indecent body diseases
18. G35† Dementia in multiple sclerosis
19. A52.1† Dementia in neurosyphilis
20. E52† Dementia in niacin [pellagra] deficiency
21. M30.0† Dementia in polyarteritis nodosa
22. M32.-† Dementia in systemic lupus erythematosus
23. B56.-†, B57.- † Dementia in trypanosomiasis
24. N18.5† Dementia in uraemia

## 25. E53.8† Dementia in vitamin B12 deficiency

There is no asterisk dagger code in the DSM-5. For specific use of diagnosis codes, DSM-5 uses codes with the 4th and 5th characters. Like the following example:

1. The code with the 4th character for Schizophrenia is given the code F20.9
2. The code with the 5th character for Schizophreniform is given the code F20.81

### 1. Glossary

Based on the researcher's analysis, the glossary on ICD-10 is contained in the initial explanation description of the category block which contains a description of the accompanying provisions in the category block and an explanatory description for each sub-category of the diagnosis code containing the definition of the term disease.

The glossary on the DSM-5 is found in the initial explanatory description of the category block containing a description of the accompanying provisions in the category block and each code containing the description of the term disease in the Delirium diagnosis code which is divided into 11 glossary categories, namely:

1. Diagnostic criteria
2. Recording procedure
3. Deciding
4. Diagnostic features
5. The relationship of symptoms that support the diagnosis
6. Prevalence
7. The development and course of the disease
8. Risk and prognostic factors
9. Diagnostic markers
10. Functional consequences of Delirium
11. Differential diagnosis

Researchers concluded that the DSM-5 provides more information about mental disorders and defines disorders more clearly as listed in glossary descriptions.

### 12. Code differences

Researchers traced several codes and found differences in the writing of code on ICD-10 and DSM-5, namely:

1. Alcohol use disorder codes

In ICD-10 code F10 Mental and behavioral disorders due to alcohol use, using the 4th character

- .0 Acute poisoning
- .1 Malicious use
- .2 Dependency syndrome
- .3 Withdrawal circumstances
- .4 State of withdrawal with delirium
- .5 Psychotic disorders
- .6 Amnestic syndrome
- .7 Late-onset residual and psychotic disorders
- .8 Other mental and behavioral disorders
- .9 Nonspecific mental and behavioral disorders

In the DSM-5 code F10 Alcohol use disorders are classified according to their severity, namely:

F10.10 Lightweight

F10.20 Medium

F10.20 Severe

## 2. Code of Psychotic and Schizophreniform Disorders

In ICD-10 the code F23.2 is used for the diagnosis of acute schizophrenia psychotic disorders and includes a brief schizophreniform diagnosis in this code. While in the DSM-5 the code F23 is used for brief psychotic disorders and for the diagnosis of Schizophreniform Disorder is given a different code namely F20.81 but still in the same 1 block category.

Short schizophreniforms in ICD-10 have the same duration of symptoms as acute schizophrenia psychotic disorders which is less than 1 month, but in the DSM-5 Short psychotic disorders have a duration of symptoms in the span of 1 day to less than 1 month and schizophreniform disorders have symptoms in the span of 1 to less than 6 months.

## CONCLUSION

Based on the results of the research that has been done, it can be concluded that there are 6 differences in the use of the terms *include*, *exclude*, *differences in the number of category blocks*, *differences in asterisk dagger codes*, *glossaries* and *writing codes*. The advice that can be given by researchers is that coders should improve their ability to understand definitions in the process

of determining codification through seminars, learning videos and advanced training related to ICD and DSM updates regularly (every 6 months).

**Acknowledgement:**

Thank you to all parties who have helped us in completing this project. We thank the journal MediSci for giving us the opportunity to publish this article.

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