## The Cost of Dark Triad Personality: A Bibliometric Analysis

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Abstract:

Research related to dark triad personality has been around since 2010 until now. Dark Triad personality plays an important role on many aspects in organization. Therefore, the Dark Triad personality must be understood thoroughly. This research aims to examine the current literature on Dark Triad and Cost by examining publication trends, citation analysis, most cited authors, overarching themes as well as to help collect the existing literature on Dark Triad and Cost to direct future research. Our research uses bibliometric methods by observing 37 research publication documents from the Scopus database for 2010-2023. Metadata was analyzed using Microsoft Excel for frequency analysis, VOS viewer for data visualization, and Harzing's Publish or Perish for citation metrics. The number of publications on Dark Triad and Cost has increased significantly. Most articles are published in journals and in English. This study identified widely discussed themes and possible themes for future research. Research on the Dark Triad and Cost is increasing in number and is being carried out with a multidisciplinary approach by authors from various countries. Finally, this research also proposes several future research paths for the Dark Triad and Cost. In future research, it is recommended to expand the use of the database and include more fields in search queries. Furthermore, we have identified some potential research themes which connected to dark triad personality and can explored in the future, like romantic relationships, life history strategies, deceptive impression management, brain mapping, amygdala, cost-benefit analysis, break-up, and brain regions.

### 1 Introduction

Dark Triad personality is an interrelated personality that focuses on Machiavellianism, narcissism and psychopathy with antagonistic, selfish, aggressive and exploitative traits that refer to ignoring social norms. Dark Triad personality is associated with poor interpersonal relationships (Banowati & Nugraha, 2022). Dark triad personality can be described as undesirable traits in a person's personality, so it is often called the three socially aversive traits. Individuals with this personality usually share a tendency to be callous, selfish, and behave badly in their interpersonal relationships. The dark triad personality consists of three dimensions. First, Machiavellianism refers to an individual who has a propensity for an exploitative interpersonal approach, a cynical perspective on human nature, and an attitude that justifies any methods to achieve their desired aims.. Second, narcissistic, individuals exhibiting this attribute typically display a sense of entitlement, superiority, and engage in self-enhancing behaviour..

Third, psychopathy, individuals with this trait tend to be characterized by an impulsive personality, likes to take risks, and physical aggression (Culture et al., 2021)

One theory that explains the Dark Triad is also called the three interrelated "dark side" personalities which focus on three behaviors which include Machiavellianism, narcissism, and psychopathy. This dark triad has levels of evil or ugliness that will influence a person's behavior (Boyle et al., 2012). Machiavellianism personality refers to the tendency to manipulate others. The theory put forward by researcher Lyons (Lyons, 2019). Machiavellianism traits can be characterized by several characteristics consisting of three related things. (1). When communicating and dealing with other people, this trait likes to carry out manipulative actions (2). A cynical view of human nature and (3) the view that seeking profit goes beyond the principles of life. Someone who has the trait of narcissism more often brags about their achievements excessively, tends not to accept criticism, does not want to be invited to

discuss or collaborate as explained in the journal (Boyle et al., 2012).

Someone who has narcissistic traits is also more likely to brag about it excessive achievement, tend not to accept criticism, do not want to be invited to compromise or cooperate, and seek relationships with other people who only feel amazed by the strengths they have are the explanations from the journal (Boyle et al., 2012). Narcissist personalities usually reject negative criticism, but if criticized or criticized by others, they will respond aggressively. One article that individuals with explains personality psychopathy tend to have a low sense of empathy, engage in impulsive behaviour and like to seek sensation. Traits psychopathy is characterized as someone who lacks empathy, does not care about other people and also when they are guilty they do not feel sorry for their actions (Rizal & Handayani, 2021). The Dark Triad personality is characterized by ignoring social norms, however, this personality still has a positive side, especially in things that are referring to one's own benefit. When that happens, individuals with the Dark Triad will become loyal friends, good strategists, good effective leaders and heroic saviors (Banowati & Nugraha, 2022).

Using a bibliometric approach, this article examines the topic of Dark Triad and Cost and the measurable and objective benefits of this method to help eliminate bias and verify what specialists already know (Setiyowati & Indiraswari, 2023). This method allows scholars to monitor changes in the literature related to the Dark Triad and Cost. By using this method researchers can identify publication trends, citation analysis, and research themes about Dark Triad and Cost.

This research attempts to answer the following research questions: First, what is the current trend and status of Dark Triad and Cost research publications? Second, what is the current citation pattern for Dark Triad and Cost publications? Finally, what are the future avenues of Dark Triad and Cost research?

This research aims to increase literacy which can be used as a benchmark for research on Dark Triad & Cost. Apart from that, this research is expected to be able to map various research related to Dark Triad & Cost, including influencing factors and related variables. It is hoped that this research can help many parties, especially academics, in further research analysis related to Dark Triad & Cost in the future.

### 2 LITERATURE REVIEW

The term "Dark Triad traits" encompasses three personality traits that are characterised by social Machiavellianism, narcissism. psychopathy (Lyons, 2019). Someone who has Machiavellianism is known as someone who will do anything to win: that is, the ends justify the means (Zakaria, et al., 2018). The dark triad personality consists of three dimensions. First, Machiavellianism, which is described as an individual with a tendency toward an exploitative interpersonal approach, a cynical perspective on human nature, and a mindset that justifies achieving goals by whatever means necessary. Second, narcissistic, individuals with this trait typically marked by a sense of entitlement, superiority, and engaging in activity that boosts their own self-image. Third, psychopathy, individuals with this trait tend to be characterized by impulsive personalities, likes to take risks, and physical aggression (Jones & Paulhus, 2014). Dark Triad features have been linked to numerous individual and societal actions. These psychological qualities have been discovered to be linked with unfavourable results within oneself and in relationships with others, and are conventionally regarded as socially undesirable attitudes (Jonason et al., 2015).

The Dark Triad trait is not realized by individuals and people tend to like people with this trait, such as film actors on television who have Dark Triad traits, namely Batman and James Bond. Individuals with a strong Dark Triad mentality have a propensity for cruelty and a willingness to achieve their objectives using expedient and unscrupulous methods (Furnham et al., 2013; Lyons, 2019).

### **2.1** Cost

Costs refer to the relinquishment of economic resources, quantified in monetary units, that have been or are anticipated to be expended to attain specific objectives (Palupi et al., 2016). Costs generally refer to the economic value expended or sacrificed to obtain a benefit. This could include money spent to purchase goods or services, time invested in an activity, or sacrifice of other resources. Costs can be defined as assets or resources sacrificed to achieve certain goals such as producing goods or providing services (Shaub et al., 2010). Costs are objects that are recorded, classified, summarized and presented by cost accounting (Yuni,et al, 2021). Costs are the monetary value or equal value of assets given up in exchange for products or services, with the

expectation of receiving benefits either immediately or in the future. (Wiharjo, 2011)

### 2.2 Dark Triad

Over the past decade, the Dark Triad qualities, such as narcissism, psychopathy, and Machiavellianism, have gained significant attention in the field of personality psychology. This is partially attributed to its incorporation into the framework of Life History Theory (Jonason et al., 2010). The dark triad refers to a cluster of three distinct patterns of unpleasant and socially troublesome behaviour: Machiavellianism, narcissism, and psychopathy (Lyons, 2019). The dark triad is a social strategy characterised by short-term, self-serving behaviour and an inclination towards manipulative tactics, as demonstrated by a positive correlation with the employment of manipulative behaviour (Jonason & Webster, 2010).

Indicators for measuring the Dark Triad according to Jonason and Webster (2010) are divided into three dimensions consisting of: Narcissism: 1) Tendency to want other people to admire. 2) Tends to want other people to pay attention. 3) Have a propensity to pursue prestige or status. 4) Tend to anticipate receiving exceptional assistance from others. Machiavellianism: 1) Exhibits a tendency to employ manipulation tactics to achieve personal objectives. 2) Using deception or lying to get your way. 3) Employing excessive praise to manipulate others into achieving one's desired outcome. 4) Inclined to manipulate others for own gain. Psychopathy: 1) Often exhibits a lack of remorse. 2) Exhibits indifference for the moral implications of my behaviour. 3) Demonstrates a tendency to exhibit callousness or insensitivity. 4) Exhibits a tendency towards cynicism.

Nevertheless, the enduring nature of these characteristics (Foster et al., 2003) and their presence in various parts of the world like North America, Oceania, and Asia (Schmitt et al., 2008), along with their correlation to favourable attributes such as emotional stability (Lyons, 2019), strong self-esteem (Sedikides et al., 2004), and enhanced sexual achievement (Jonason et al., 2012), indicate that the Dark Triad traits may offer advantages to individuals, particularly in the context of mating. When applied to psychology, this theory posits that personality features can indicate biases in the decisions men and women make in their lives, leading to gender inequalities. Specifically, men are more inclined to make immediate choices compared to women (Rushton, 1985).

distinguished by its inherent sense of entitlement, superiority, arrogance, and exploitation (R. Raskin & Terry, 1988); psychopathy is well-known for its traits of callousness and limited empathy (Ali et al., 2009); Machiavellianism is renowned for its charismatic social charm and manipulative tendencies (Firmanzah, 2008).

### 2.2.1 Characteristics of the Dark Triad

Narcissism is linked to emotions of grandiosity, entitlement, power, and superiority over others (Raskin & Hall, 1979). Several characteristics of narcissism (Jonason et al., 2012; Lyons, 2019), namely: (1) Feeling that other people admire him; (2) Individuals anticipate receiving special assistance from others; (3) Individuals desire to gain popularity; (4) Individuals perceive themselves as stylish (e.g., possessing the finest clothing, footwear, or other possessions); (5) Individuals experience a sense of superiority in social circumstances; (6) Individuals have a sense of responsibility.

Psychopathy is a dimensional construct that is defined by impairments in interpersonal and affective functioning. These deficits include a lack of empathy, superficial emotional experiences, and antisocial and impulsive behaviour (Williams et al., 2007; Hare & 2008). Neumann, Some characteristics psychopathy (Jonason et al., 2012; Lyons, 2019), namely: (1) Individuals have difficulty understanding other people's feelings; (2 Individuals are indifferent to the opinions of others on the morality of their activities; (3) Other people's feelings are not considered important to the individual; Individuals think that the rules do not apply to them.

Machiavellianism refers to the tendency to have agentic desires, a usually unfavourable perception of others, and a pragmatic approach to accomplishing personal goals through manipulation and deception of others (Rauthmann & Will, 2011). Several characteristics of Machiavellianism (Jonason et al., 2012; Lyons, 2019), namely: (1) Individuals employ deception to achieve their desired outcomes; (2) Individuals exert control over others to achieve their desired outcomes; (3) Individuals employ flattery as a means to achieve their desired outcomes; (4) Individuals exploit others for their own benefit; (5) Individuals manipulate others as a means to fulfil their own needs; (6) Individuals occasionally feign affection towards others in order to manipulate them into performing tasks on their behalf. Men are more easily exhibit these characteristics more readily than women, maybe due to risk asymmetry (Jonason et al., 2012).

### 2.2.2 Factors Causing the Dark Triad

Narcissism is a personality trait characterized by high self-confidence, a desire for approval, and a lack of empathy for others. Some factors that cause narcissism can involve:

#### Genetic Factors

Genetic research has shown that there are genetic factors involved in the development of narcissism. A twin study showed that heritability has a significant contribution to variation in narcissism (Kandler et al., 2010). These results suggest that genetic factors can influence an individual's predisposition towards narcissism.

#### Environmental factor

Environmental factors can significantly influence the emergence of narcissistic traits. Excessive parenting, where children are often given praise without regard to actual achievements, can lead to the development of narcissistic attitudes in individuals (Brummelman et al., 2016). The development of narcissism can also be caused by an environment that promotes intense competition and a focus on personal superiority.

### • Life experience

Several studies show that life experiences, especially those involving trauma or negative experiences, can be a factor that triggers the development of narcissism as a form of self-defense (Russ et al., 2004). Individuals may develop narcissistic attitudes as a way to protect themselves from emotional vulnerability or low self-esteem.

Machiavellianism involves manipulative traits, cunning, and a lack of feeling for ethics or morality. Factors causing Machiavellianism can involve the following:

### Genetic Factors

Research has shown that genetic factors can contribute to the development of Machiavellianism. Two studies demonstrated heritability in Machiavellianism, suggesting that genetic factors may play a role in a person's tendency to exhibit Machiavellian traits (Vernon et al., 2008).

# • Environmental and Social Experience Environmental and social factors can also influence the development of Machiavellianism. Life experiences, such as life situations that require manipulative tactics to survive or gain advantage, can shape Machiavellian traits (Marcin et al., 2018). The development of Machiavellianism can also be influenced by social interactions that encourage manipulative strategies to achieve goals.

### Cognitive and Personality Factors

Some research suggests that cognitive factors, such as level of intelligence, may be related to Machiavellianism. A person with high intelligence may have a greater ability to implement and plan manipulative tactics (Cieciuch, 2018). Apart from that, the development of Machiavellianism can also be caused by certain personality traits, such as not having empathy.

Psychopathy involves traits such as a lack of empathy, a lack of remorse for behaviour that harms others, impulsive behaviour, and a lack of guilt. The factors causing psychopathy can be very complex and involve the following things:

#### Genetic factors

Genetic research suggests that psychopathy has a strong genetic basis. Twin studies and adoption research show that there is significant heritability in psychopathy, suggesting that genetic factors may play a role in individuals' tendencies toward antisocial behaviour and a lack of empathy (Rhee & Waldman, 2002).

#### • Family environment

The interplay of familial dynamics during childhood may influence the emergence of psychopathic traits. Experiences in family environments full of conflict, lack of attention, violence, or instability can contribute to the development of psychopathic traits.

### Childhood trauma

Some individuals may develop psychopathic traits in response to childhood traumatic experiences involving neglect, abuse, or violence. Such trauma can interfere with healthy emotional and social development.

### • Neurobiological Factors

Neurobiological research suggests that changes in brain structure and function may be associated with psychopathy. Some studies have found a link between psychopathy and dysfunction in brain areas involved in decision making, empathy, and impulse control (Blair, 2005). This suggests that neurobiological factors may be a cause of psychopathy.

### 3 RESEARCH METHOD

This research design utilizes bibliometric analysis to depict the outcomes of journal publishing. Bibliometric analysis aims to get descriptive data and insights on many issues related to the publication of learning models. Through this analysis, it is expected to gain a comprehensive overview and collaboration

among researchers in their respective fields, as well as to address research questions. According to Potter (Potter, 1981), bibliometrics is the study and measurement of publication patterns, all types of and communication, their authors. Bibliometrics is a quantitative and statistical study of patterns in scientific communication, including but not limited to articles, books, journals, and other forms of published literature (Daim et al., 2006; Michael Hall, 2011). Detailed information about publications is analyzed using bibliometrics (Rusly et al., 2019), including authors, citations, and keyword frequencies. Therefore, bibliometric techniques can be applied to assess the significance of research in all fields of knowledge."

This research is a bibliometric analysis using Scopus-indexed journals on program coordination using the VOS viewer application. Data was collected from the Scopus database using search queries or keywords, namely "Dark Triad & Cost." The publication data from Scopus covers the period from 2010 to 2023, totalling 13 years and resulting in 37 documents on Dark Triad & Cost. The annual citation counts from 2010 to 2023 is 1,041 citations. Peter K. Jonason is the researcher with the highest productivity, contributing a total of 7 publications. Metadata export can be performed in CSV and RIS formats. The researcher also conducted frequency analysis using Microsoft Excel, network visualization in VOS viewer, and citation metrics using Harzing's Publish or Perish. Researchers can track publication patterns, conduct citation analysis, identify frequently cited authors, and explore the most popular authors and study topics related to Dark Triad and Cost.

### 4 RESULT AND DISCUSSION

### 4.1 Trends and Current Conditions of Publications

The first research question pertains to the trends and current conditions of publications regarding the Dark Triad and Cost. In this study, we elaborate on the trends and publications based on the year, type, and source of documents, publications based on the title of the source, publications based on country, institution, language of documents, and subject area. The section on publications based on the year includes total citations, the number of cited publications, and average citations.

### **4.1.1** Number of Publications and Citations Per Year

The table and figure below show the research productivity of Dark Triad And Cost based on each year. Research on Dark Triad And Cost has been conducted since 2010. From the table below, the number of publications varies from year to year, with some years having more than one publication and other years having only one publication. In 2021, there was an increase in the number of publications, with a total of 6 documents, and the highest number of publications occurred in 2023, with a total of 7 documents.

The table in Table 1. presents the number of cited publications (TP), total citations (TC), and the average total citations per publication (C/P). The analysis of citation counts indicates a significant variation in the number of citations received from year to year. The highest total citations occurred in 2012, with 332 citations per year for a total of 2 publications, while the lowest citations occurred in 2023, with 2 citations per year for a total of 7 publications. Therefore, the total citations during the period 2010-2023 amount to 1041 citations, demonstrating the cumulative impact of these publications.

Table 1. Year of Publication

Year	TP	%	TC	C/P
2010	1	2,70%	213	213
2012	2	5,40%	332	166
2013	1	2,70%	96	96
2014	2	5,40%	9	4,5
2015	1	2,70%	109	109
2016	2	5,40%	60	30
2017	3	8,10%	101	33,67
2018	2	5,40%	27	13,5
2019	1	2,70%	6	6
2020	nfergnce	8,10%	25	8,3
2021	6	16,20%	33	5,5
2022	6	16,20%	28	4,67
2023	7	18,90%	2	0,28
Total	37	100%	1041	

Figure 1. shows that Dark Triad and Cost research publications experienced a linear trend from 2010-2023 which is expected to increase in the coming year, while Figure 2. shows the total publications and citations by year.

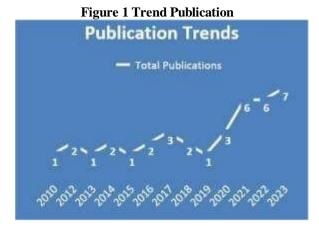
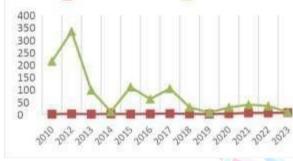


Figure 2 Publication and Citation per Year

Publication & Citation Trends

Total Publications Total Citations

400
350



### **4.1.2** Types and Source Documents

The types of documents include articles, book chapters, and conference papers; document sources encompass journals, books, book series, conference proceedings, and trade journals. It is important to note that conference papers appearing in types of documents may differ from conference papers appearing in document sources (Sweileh et al., 2017). For example, papers presented at a conference are categorized as conference papers based on document types. However, these papers may also be published as journal articles or book chapters under source types (Ahmi et al., 2019).

Table 2. Document Type Classification

Document Type	Frequency	%
Article	33	89,20%
Book Chapter	2	5,40%
Conference paper	1	2,70%
Review	1	2,70%
Total	37	100%

From the table presented above, the majority of publications come from articles. Articles are the most common type of document, with 33 titles in the dataset, followed by one book chapter, one conference paper, and one review. So, the total number of titles in the dataset is 37. This distribution indicates that articles are the dominant document type in this search. The relatively small number of book chapters, conference papers, and reviews suggests their relatively limited representation in this dataset.

**Table 3.** Document Sources

Document Source	Frequency	%
Journal	34	91,90%
Book	2	5,40%
Conference Proceeding	1	2,70%
Total	37	100%

Table 3 presents the sources of documents in the Dark Triad and Cost research publication. The document sources are measured based on the presented source titles. There are three document sources in the Dark Triad and Cost research publication. These three sources include journals, books, and conference proceedings. Journals are the most abundant document source with a total of 34 documents, followed by books with 2 documents, and conference proceedings with 1 document. Thus, the total number of document sources in the above data set is 37. In this case, it indicates that journals are the dominant document source.

### 4.1.3 Most Active Source Titles

Table 4. shows the titles of the most active sources. From the table below, the Journal of Personality and Individual Differences is the journal with the highest publication in Dark Triad and Cost research, amounting to 13 documents. This is followed by Evolutionary Psychological Science with 3 documents, and then 4 journals, each with 2 documents, and 13 journals, each with only 1 document. Therefore, the total number of documents from the table below is 37. The Journal of Personality and Individual Differences plays a primary role in this field, and this can be understood due to its focus on behavioural and psychological aspects.

Table 4. Most Active Source Title

1 able 4. Most Active Sour	ee Title
Source Title	<b>Total Document</b>
Personality And Individual Differences	13
Evolutionary Psychological Sciences	3
Plos One	2
Journal Of Business Ethics	2
Frontiers In Psychology	2
Evolutionary Psychology	2
Social Behaviour And Personality	1
Routledge Companion To Dramaturgy	1
Revista De Psicopatología Y Psicología Clínica	1
Review Of General Psychology	1
Psychological Assessment	1
Personality And Social Psychology Bulletin	1
Oxford Handbook Of Human Mating	
Management Research Review	1
Journal Of Business Research	1
European Archives Of Psychiatry And Clínica Neuroscience	1
Behavioral And Brains Sciences	1
Archives Of Sexual Behaviour	1
26th America Conference on Information Systems Ameis 2020	1

Germany	2	3,51%
Canada	2	3,51%
Sweden	1	1,75%
Spain	1	1,75%

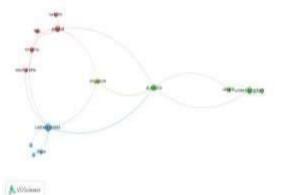


Figure 4. Geographic Distribution Visualization in VOS viewer

Researchers from 24 countries contributed to the publication studying the Dark Triad and Cost. The table above only shows the top 10 countries contributing to this publication. Interestingly, one Asian country made it to the top 10, Singapore. However, research on the Dark Triad and Cost is still dominated by developed countries, with the United States holding the top position.

### 4.1.4 Geographical Distribution of Publications

**Table 5.** Top 10 Countries contributed to the publications.

Country	Total of Publication	%(N=57)
United States	15	26,32%
United Kingdom	7	12,28%
Poland	5	8,77%
Australia	5	8,77%
Singapore	3	5,26%
Romania	2	3,51%

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Figure 5. Map Visualization of Citation Network by Country

The above figure shows a visualization map of the authors' network according to their countries. In this analysis, a country is included if it has at least 1 article with at least one citation. In this study, out of the 24 countries involved in dark triad & cost publications, 18 countries meet the threshold. These figures correspond to Table 5. The data indicates that

the United States plays a crucial role in building a network with authors from other countries, followed by Poland, Australia, and Singapore.

### 4.1.5 Most Influential Institutions

**Table 6.** Most Influential Institutions with a Minimum of One Publication

Affiliation	Country	Total Publication
Western Sydney University	Australia	5
University of Liverpool	United Kingdom	3
Universitatea din Bucuresti	Romania	2
University of Nevada, Reno	United States	2
Bradley University	United States	2
Western University	Canada	2
Singapore Management University	Singapore	2
Uniwersytet Jagiellonski	Poland	2
Indian River Medical Center	United States	1
Division of Clynical Science	United States	1



Figure 6. Visualization of the Institution in VOSviewer Medical

Sixty-four institutions have contributed to the publication of research on the Dark Triad and Cost. The table above presents ten institutions that have at least one publication on Dark Triad and Cost research. The institution that has published the most research on Dark Triad and Cost is Western Sydney University, with a total of 5 publications. In addition, four universities from the United States (University of Nevada, Reno, Bradley University, Indian River Medical Center, and Division of Clinical Science) are included. One Asian institution is part of the Dark Triad and Cost research publications, namely Singapore Management University located in

Singapore. Following that, other contributing universities are also spread across several countries in Dark Triad and Cost research. These institutions include the University of Liverpool (United Kingdom), Universitatea din Bucuresti (Romania), Western University (Canada), and Uniwersytet Jagiellonski (Poland).

### 4.1.6 Language of Document

Table 7. Languages Used for Publications

Tubit it Languages esta for I deritations			
Languag e	Frequency	%	
English	36	97,30%	
Spanish	1	2,70%	
Total	37	100%	

The table above shows the use of languages in publications. There are two languages. English is the predominant language in 36 publications, and apart from English, there is one publication in Spanish. The limited use of languages in publications indicates that research on the Dark Triad and Cost is still relatively scarce in many countries.

### 4.1.7 Subject Area

Tabel 8. Subject Area

Subject Area	Total of Publica tion	%(N=57)
Psychology	28	51,85%
Neuroscience	4	7,41
Business, Management, and Accounting	4	7,41
Arts and Humanities	4	7,41
Social Sciences	3	5,56
Medicine Medicine Medicine	3	5,56
Multidisciplinary	2	3,7
Economics, Econometrics, and Finance	2	3,7
Biochemistry, Genetics, and Molecular Biology	2	3,7
Computer Science	1	1,85
Agricultural and Biological Sciences	1	1,85
Total	54	100%

Based on metadata extracted from the Scopus database, there are 11 fields of study related to

publications on Dark Triad and Cost research. The table above displays various fields of study in Dark Triad and Cost research, with the psychology subject area being more dominant. This table indicates that Dark Triad and Cost is a multidisciplinary field of study.

### 4.1.8 Keyword Based on all Keywords.

The relationship between several key words in dark triad & cost research is illustrated in the figure and table below. This shows how close the keywords in the research title are to the research topic, both in comparable and non-comparable research. The size of the circles in the image above shows how strongly the keywords are related to the dark triad & cost topic. Dark triad is the highest keyword with a total of 24 keywords. Followed by Machiavellianism with 19 keywords and Psychopathy with 16 keywords.

Tabel 9. Keyword

Keyword	Total of	%(N=168)
	Publication	
Dark Triad	24	14,2%
Machiavellianism	19	11,3%
Psychopathy	16	9,5%
Narcissism	15	8,9%
Human	9	5,4%
Male	8	4,8%
Humans	8	4,8%
Female	7	4,1%
Personality	5	2,9%
Adult	5	2,9%
Article	4	2,4%
Adolescent	4	2,4%
Young Adult	3	1,8%
Psychology	3	1,8%
Middle Aged	3	1,8%
Life History Theory	3	1,8%
Human Experiment	3	1,8%
Controlled Study	3	1,8%
The Dark Triad Traits	2	1,2%
Sexuality	2	1,2%
Sexual Partners	2	1,2%
Sexual Behavior	2	1,2%
Self Esteem		1,2%
Romantic Relationships	2 2	1,2%
Quality Of Life	2	1,2%
Personality Test	2	1,2%
Motivation	2	1,2%
Morality	2	1,2%
Mate Retention	2	1,2%
Major Clinical Study	2	1,2%
Infidelity	2	1,2%
Total	168	100%

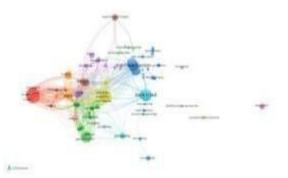


Figure 7. Network visualization map of all keywords

### 4.2 Citation Patterns in Recent Publications on Dark Triad and Cost

The second research question is to the examination of citation patterns within contemporary literature on the Dark Triad and Cost. The objective of this study is to ascertain influential scholarly works and examine patterns of citation. The citation metrics of 37 publications were analyzed using Harzing's Publish or Perish software, while the network of these articles was shown using VOS viewer.

### 4.2.1 Citation Analysis

Tabel 10. Citation metrics

Tabel 10. Citation metrics				
Metric	Data			
Publication years	2010-2023			
Citation years	13 (2010-2023)			
Papers	37			
Citations	1041			
Cities/year	80.08.00			
Cities/paper	28.14.00			
Author/paper /th	01.00			
h-index	12			
g-index	32			
hI,norm	12			
hI, annual	0,063888889			
hA-index	7			
Papers with ACC >= 1,2,5,10,20: 29,18,11,6,1				

The table above summarizes citation metrics. This table was obtained by importing a file in RIS format from the Scopus database into Harzing's Publish or

Perish software. There are 1,041 citations reported in the 13 years (2010 - 2023) of Dark Triad and Cost publications, averaging 79.77 citations per year.

Table 11. Most Cited Article

Ran k	Authors	Title	Year	Cites
1	Jonason P.K.; Li N.P.; Buss D.M.	The costs and benefits of the Dark Triad: Implications for mate poaching and mate retention tactics	2010	213
2	Jonason P.K.; Webster G.D.; Schmitt D.P.; Li N.P.; Crysel L.	The antihero in popular culture: Life history theory and the dark triad personality traits	2012	186
3	Miller J.D.; Few L.R.; Seibert L.A.; Watts A.; Zeichner A.; Lynam D.R.	An examination of the Dirty Dozen measure of psychopathy: A cautionary tale about the costs of brief measures	2012	146
4	Jonason P.K.; Baughman H.M.; Carter G.L.; Parker P.	Dorian Gray without his portrait: Psychological, social, and physical health costs associated with the Dark Triad	2015	109
5	Jonason P.K.; Li N.P.; Czarna A.Z.	Quick and dirty: Some psychosocial costs associated with the dark triad in three countries	2013	96
	Gotz F.M.; Stieger S.; Reips U-D.	Users of the main smartphone operating systems (iOS, Android) differ only little in personality	2017	Inte Med 63
	Stenason L.; Vernon P.A.	The Dark Triad, reinforcement sensitivity and substance use	2016	44
	Jonason P.K.; Lavertu A.N.	The reproductive costs and benefits associated with the Dark Triad traits in women	2017	30

	Jones D.N.; Mueller S.M.	Is Machiavellianism Dead or Dormant? The Perils of Researching a Secretive Construct	2022	23
0	Lata M.; Chaudhary R.	Dark Triad and instigated incivility: The moderating role of workplace spirituality	2020	21

The table above displays the top 10 most cited where the most cite article reaches 213 citations.



Figure 8. Author visualization in VOS viewer

### 4.3 Discussion

Over the past decade, there has been a surge of interest surrounding the Dark Triad, namely narcissism, psychopathy, and Machiavellianism, within the field of personality.

### 4.3.1 The Relationship of the Dark Triad to

Corruption refers to forms of activity that violate official ethics or abuse of power in an organization for personal gain (Hikmah et al., 2020). Corruption intentions are more influenced by internal factors of individuals in the organization, namely the dark triad personality. In line with the assumptions of previous research which illustrates that a person's personality can indeed be a factor that influences deviant behaviour in organizations. Dark triad personality will tend to influence corruption intentions in organizations more (Culture et al., 2021; Hikmah et al., 2020). Based on various studies, it has been found that the factors causing corruption include

psychological factors (trains and values) and external factors, namely organizational culture, and economic conditions (Matulessy et al., 2022).

There are significant positive correlations between dark triad personality and corrupt intentions. First, Individuals exhibiting the dark triad of personality has a proclivity to pursue personal gain through the use of any available methods. Second, individuals with the dark triad mentality exhibit a proclivity for manipulation, employing this strategic behaviour to accomplish their individual objectives. Third, individuals exhibiting a dark triad personality trait tend to have diminished levels of empathy towards others. Consequently, such individuals perceive deviant behaviour as a normative aspect of their social interactions (Zhao et al., 2016).

Dark triad personality is indeed a factor that can give rise to undesirable behaviour in organizations, such as other deviant behaviour (Stefano et al., 2019). Zhao et al. (2016) found that someone who shows a high score on the dark triad personality will be correlated with a high desire to commit corruption, especially individuals who believe in the magnitude of luck in obtaining something that is only useful for themselves. In this research, it was found that two aspects of the dark triad personality, namely: narcissism and psychopathy, are personality types that emphasize luck to avoid punishment when committing corruption. Furthermore, someone who has a Machiavellian personality does not emphasize luck when corrupting, but the individual prefers to manipulate other individuals to commit corruption.

### 4.3.1 The Dark Triad's Relationship to Performance

Research on the impact of CEO personality on firm performance is still in its early stages, prompting scholars to advocate for further investigation. Furthermore, scholars have advocated for the integration of mediation and moderating effects (Palmer et al., 2020; Reina et al., 2014), as well as for expanding the scope beyond the presumption that dark personality traits are invariably bad (Smith et al., 2018).

The present study investigates the phenomenon of the CEO dark triad, which encompasses the traits of Machiavellianism, narcissism, and psychopathy. This combination of traits constitutes a potential manifestation of the "dark side" of leadership. Moreover, empirical evidence from meta-analytic studies conducted by Boyle et al. (2012) supports the notion that the presence of dark triad traits in CEOs has significant negative consequences for employees.

Additionally, it is observed that the performance of the firm and the effectiveness of top management, as well as the behaviour exhibited by employees and leaders, are more likely to be influenced by CEOs with elevated levels of dark triad traits.

The evidence presented in our study provides support for our premise that the presence of dark triad traits in a CEO has a direct negative impact. Hence, with respect to the performance of organizations and the capital possessed by managers, our research outcomes align with the meta-analyses conducted by Smith et al. (2018). The study reveals that the presence of CEO dark triad traits has both positive and negative effects on company performance, particularly in relation to internal and external metrics. These findings offer valuable insights into the reasons for the job retention and job-seeking behaviours of CEOs exhibiting high levels of the dark triad personality traits. In the context of organizational dynamics, it can be argued that the personality of individuals within a corporation can vield advantageous outcomes, particularly in relation to external stakeholders such as consumers, as opposed to internal stakeholders like employees.

It is noteworthy that the presence of managerial capital serves as a partial mediator in the direct impact of a CEO with dark triad traits on the performance of an organization. However, it is important to highlight that the direct influence of a CEO with dark triad traits remains strong. This implies that the influence of managerial capital on organizational performance is not only favourable, but also that CEOs with strong dark personalities can exert a significant impact on the characteristics of their organizations, often with negative consequences.

The presence of management capital has a favourable impact on sales breakthroughs, confirming previous expectations. However, it is worth noting that there is no mediating effect observed in the relationship between the positive influence of CEOs with dark triad traits and sales breakthroughs. This finding is noteworthy because of its distinctiveness. CEOs exhibiting traits associated the dark triad personality Machiavellianism, narcissism, and psychopathy) have the potential to exert a positive influence on breakthrough sales outcomes. Notably, this influence remains unaffected by the level of managerial competencies possessed by these individuals. This statement serves to support the argument put forth by Smith et al. (2018) regarding the need for further investigation into the dark personalities of CEOs.

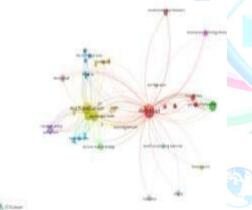
In this study, we claim that the exhibition of 'show-person' characteristics by a Chief Executive

Officer (CEO) who possesses elevated levels of the dark triad personality traits not only yields direct advantages in terms of achieving significant sales breakthroughs, but also demonstrates a distinct influence that is separate from the impact of managerial capital, which itself has a favourable effect. Notwithstanding the existing literature's assertion that top management teams (TMTs) are expected to mitigate the negative consequences associated with chief executive officers (CEOs) (Palmer et al., 2020). This suggests that the presence of dark triad traits in CEOs is associated with improved sales performance, as supported by Smith et al's research (2018).

### 4.4 Future Research

### 4.4.1 Keyword Analysis Based on Author Keywords

The fourth research question pertains to the future direction of Dark Triad and Cost research. In this regard, we highlight topics that have been thoroughly investigated and identify research areas that can be explored in the future.



**Figure 9.** Network visualization map of author keywords

The study of keywords is performed with VOS viewer, a tool employed to visually represent the dynamics and structure of the field under investigation. The VOS viewer is a robust instrument utilized for doing comprehensive co-occurrence analysis of keywords, facilitating the exploration of specific study domains (Valenzuela et al., 2017; van Eck & Waltman, 2010). The keyword network visualization is depicted in Figure 8. Sweileh et al. (2017) assert that the degree of association among terms is visually represented by means of color, circle size, text size, and line thickness.

#### 4.4.2 Themes for Future Studies

Potential research topics for further investigation can be observed in the figure below. The yellow color indicates areas with potential for further research related to Dark Triad and Cost. In this context, we identify potential research themes: romantic relationships, life history strategies, deceptive impression management, brain mapping, amygdala, cost-benefit analysis, break-up, and brain regions.

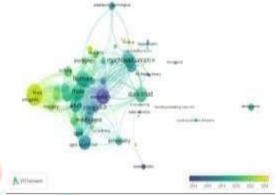


Figure 10. Overlay of the author's keyword visualization map

### 5 CONCLUSIONS

This study utilizes bibliometric analysis as a to acquire a comprehensive methodology understanding of the present patterns and status of research, prevailing citations, prominent authors, and prospective research avenues in the domains of Dark Triad and Cost. Firstly, regarding the current trend and condition of Dark Triad and Cost research publications. Studies on Dark Triad and Cost began in 2010 and have experienced a significant increase since then. Most of these publications are articles, accounting for 89%, and are primarily in English. "Personality and Individual Differences" is the most prolific source for these studies. The United States is the most dominant contributor to Dark Triad and Cost research, with the University of Western Sydney University from Australia being the leading institution. "Dark triad" is the most frequent keyword, occurring 24 times, highlighting the focus on the personality perspective within the psychology field.

Secondly, concerning citation patterns in current Dark Triad and Cost publications. The most cited articles are predominantly authored by three individuals, with P. Jonason (2010) receiving the highest number of citations (213). Over the 13-year

period, there are 37 articles on Dark Triad and Cost with a total of 1,041 citations, with P. Jonason (2010) making a significant contribution to this count. Highly cited articles mostly originate from the United States, the United Kingdom, Poland, and Australia.

Thirdly, regarding future research. We identified extensively studied themes and potential future research themes. The most researched themes based on keyword analysis include Dark Triad, Machiavellianism, Psychopathy, Narcissism, Human, Male, Humans, Female. Potential future research themes encompass romantic relationships, life history strategies, deceptive impression management, brain mapping, amygdala, cost-benefit analysis, break-up, and brain regions.

This research has significant implications for understanding characteristics in social, psychological, and behavioural contexts and impacts on individuals and groups. The following are some of the implications and impacts of this research:

- This research helps to understand the characteristics of the Dark Triad comprehensively, including how the three are interrelated and can influence individuals and the environment.
- 2. This research clearly illustrates the impact of the Dark Triad on social interactions. Knowing how Machiavellianism, Narcissism, and Psychopathy affect relationships between individuals helps in identifying ways to improve social interactions.
- 3. This research studies help understand how Dark Triad characteristics influence the work environment. This can help management to minimize negative impacts and maximize the positive contributions of individuals with these characteristics.
- 4. This research allows for the development of better intervention strategies to help individuals with Dark Triad personalities manage their behaviour, understand its impact, edical and prevent negative consequences.
- 5. This research studies can influence social policy in terms of setting behavioural norms and approaches to dealing with socially detrimental or manipulative behaviour.

This research has limitations that should be considered for future studies. Firstly, the use of the Scopus database may limit the comprehensiveness of the findings. Expanding the database sources to include Dimension, Web of Science, PubMed, and Google Scholar could provide more comprehensive results. Secondly, the keyword selection focused only

on the document titles, and future research could benefit from including other fields such as authors, affiliations, source titles, abstracts, and additional keywords for a more representative analysis. Lastly, it is acknowledged that no search query is 100% perfect. Despite these challenges, our study contributes to the bibliometric analysis of the Dark Triad and Cost field, which is still relatively underexplored. It is hoped that this research provides meaningful insights that can serve as a reference for advancing knowledge in this field.

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