The Psychological Impact of Toxic Leadership on Teachers within South African Schools – A Scoping Review

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ABSTRACT

Toxic leadership (TL) is a prevalent phenomenon within South African schools, yet is vastly under-studied. Abuse by leaders has a detrimental effect on the well-being of teachers, which may create barriers in the learning and teaching process. This study sought to assess the experience of educators who work under toxic leaders as well as the impact of toxic leadership on the psychological well-being of educators under principals/ heads of department, who hold a toxic leadership style, within in a South African context. This was done by conducting a scoping review, using the updated 2020 JBI methodology. The key words used in the review were: "toxic leadership", "workplace bullying", "teachers/educators", "schools" and "South Africa". From these key words approximately 1904 studies appeared. Further filtering, using BOOLEAN operators, was applied to these studies. Relevant studies, as well as their reference lists, were then screened. From these screened studies, 12 were applicable to the current review. This review found that there are a number of recurring psychological effects of toxic leadership in schools across South Africa, with the most common being stress, feelings of powerlessness, isolation, loss of self-confidence, humiliation, low morale, depression, and hopelessness. The study also found that common experiences of teachers under toxic leaders were that abusive superiors were overbearing and over-controlling of the victims, that the victims' personal (social and familial relationships) lives were negatively affected by the abuse they experienced, and that victims experienced public humiliation. Furthermore, victims were excluded from conversations and/or events, because individuals who were the favourites were given preference in these situations. Additionally, the common experiences reported by victims were being threatened, being the subject of malicious rumours, being ignored or given "silent treatment" and being verbally abused (e.g. swearing and insults). A number of gaps and limitations were identified, a primary limitation being the fact that the construct of TL was not sufficiently investigated

in schools. Consequently, the present study's reviewers needed to use workplace bullying, and other proxies of toxic leadership, to identify suitable studies.

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Chapter 1: Introduction

Leadership, that is the ability to influence, encourage, support and facilitate individuals (Chen et al., 2007) is a phenomenon that has attracted attention since the beginning of civilisation. The evidence of such attention has been documented as far back as that of great leaders and strong figures since the beginning of the Egyptian Civilisation (Saenz, 2015). Leadership is an important tool in organisations as it provides inspiration and supervision, and ensures that the organisation is effectively functioning (Luthans et al., 2004). Therefore, leadership can be either a business's greatest asset or its biggest liability.

Numerous studies have been conducted to uncover the effects of different leadership styles on the effectiveness of organisations (e.g. Larsson & Vinberg, 2010; Lee, 2005; Lok & Crawford, 2004; Wakabi, 2016). These studies have indicated that the leadership style of organisations can directly impact upon the wellbeing and productivity of its employees (Boddy et al., 2021). Certain leadership styles are more harmful than others, and one of the most noxious leadership styles is that of toxic leadership (TL) (Singh et al., 2018).

Toxic leaders are abusive, unpredictable, have narcissistic tendencies, lack integrity, micromanage, and cause disruptiveness in the workplace (Paltu & Brouwers, 2020). TL was first investigated in the US military, with the data and concepts emerging from those studies being translated relatively recently into the corporate realm (Winn & Dykes, 2019).

While investigation of the construct has been done in private sector organisations, there has been significantly less research on TL conducted within schools (Başkan, 2020), especially within the South African context. Exploration of toxic leadership within South African schools is scant - as a preliminary search for studies found very few available articles on the topic within this context. Globally, the concept has received very little attention in schools at a primary, secondary and tertiary level. Given that schools are themselves 'organisations', with hierarchies and positions of varying degrees of power (Hoy &

Sweetland, 2001; Prinsloo, 2005), it is likely that the same issues of leadership which occur within the military or even corporate organisations can exist in schools.

According to Mbiza (2018) schools, and the entire field of education, maintain a top-down hierarchical structure with levels of authority. In this hierarchical structure there are strict lines of reporting, however, the structure is flatter in the sense that there are fewer levels (approximately three) and the scope of responsibilities in each level of the hierarchy are broader (Conco, 2004). School leadership is collectively known as the School Management Team (SMT), and comprises of, at its highest level, the position of principal, followed by the deputy principal and finally the heads of departments (HoDs) (Conco, 2004; Kalaivani, 2016).

The role of the principal is to manage the school, in partnership with the other stakeholders of the school (which would include the SMT, students and parents) by effective delegation and involving each stakeholder in the decision-making process (Conco, 2004; Department of Education, 2008). According to the Department of Basic Education, the purpose of the position of deputy principal is to aid the principal in managing the school, and to be aware of all administrative procedures for all school activities and processes (Department of Basic Education, 2016). The department head (HoD) is to teach lessons in the classroom, take responsibility for the successful functioning of their respective department, and to organise relevant extra-curricular activities which promote the education of students in the appropriate manner for a particular “subject, learning area or phase” (Department of Basic Education, 2016, p.36). The role of teachers, who are not part of the SMT but who are still stakeholders, is to educate in all aspects, including administrative, and disciplinary, as well as to organise appropriate extra-curricular activities that promote learning (Department of Basic education, 2016).

At the beginning of the twenty-first century, an interest in what is known as "educational leadership" began to increase because of the ubiquitous belief that the quality of leadership influences the school and stakeholder (students etc.) outcomes (Bush, 2007). However, as was the case in the initial stages of leadership research within other sectors, it became clear that the concept of leadership within education was explored only in the view of positive leadership (Smith & Fredricks-Lowman, 2019). More recently research within educational leadership has shown an interest in investigating the spectrum of leadership styles - from both a positive to destructive perspective (Başkan, 2020).

This is of particular importance in South Africa where the environments within South African schools are unstable as they have undergone major political and social changes, which have brought about continual and ineffective adjustments to government policies (Batchelor, 2019). These environments have been characterised as toxic, with a concerning lack of resources, and major demands on staff, leaving them feeling overworked, discontented and stressed (Jacobs, 2014). School conditions are deteriorating increasingly as the socio-economic level, and wealth of the communities in which they operate, decreases (Potterton, 2023). These conditions include lack of resources, moral degradation, violence and crime (Mncube & Madikizela-Madiya, 2014; Winnaar et al., 2018). These conditions breed a toxic environment, and a toxic environment is the breeding ground for toxic leadership (Green, 2014).

While this is known, and anecdotal evidence suggests that teachers are experiencing TL in schools, academic research on the experience of teachers under toxic leaders within South African schools is lacking. Thus, any recommendations on how to deal with TL, and interventions that can be implemented in schools to eradicate TL, are very generic and supported only by those data gathered in private sector organisations (de Wet & Jacobs, 2013). Although schools are organisations, the context and environments of schools differ

from those seen in the corporate world. Therefore, it is understandable that these interventions, while effective within corporate organsations, may prove insufficient when translated and applied to school settings.

Few theories have been developed to investigate TL, but the most prominent one used is the *toxic triangle* theory. Padilla, Hogan and Kaiser (2007) developed this theory as a framework through which researchers can investigate TL according to three components: leader toxicity, conducive environment, susceptible followers (Hadadian & Zarei, 2016; Padilla et al., 2007). Furthermore, another well-known model is that of Schmidt's Toxic Leadership Scale, which was designed to identify leadership behaviours by investigating 5 dimensions: self-promotion, abusive supervision, unpredictability, narcissism, and authoritarian leadership (Schmidt, 2008). However, the current theories and research regarding TL lack a focus on the effects of TL on the well-being of employees as it is not deemed an important outcome (Inceoglu et al., 2018). Additionally, if TL is investigated, it is studied as a secondary outcome or as a mediator used to explain the relationship between performance and leadership (Montano et al., 2017).

Therefore, this information proves that there is a gap in current research on TL regarding its investigation within schools, and regarding the effect that the construct has on the well-being of educators. With this in mind, the aim of the current study is to investigate, using a scoping review, the existing data to understand: 1) the experience of teachers under toxic leaders in South African schools; and 2) the impact of TL on the psychological well-being of educators under principals/heads of departments, who hold a toxic leadership style, in South African schools.

Chapter 2: Literature review

2.1 Defining toxic leadership

Many attempts have been made to define toxic leadership. However, contention still surrounds the definition of the construct (Dagless, 2018; Davis, 2016; Fahie, 2019). Some reasons for this include the fact that individuals perceive leadership differently, therefore, one individual may perceive a leader as a hero, while another may view them as toxic (Lipman-Blumen, 2010). Additionally, leaders do not need to display toxic behaviours in all circumstances, or every day, to be considered toxic leaders (Mehta & Maheshwari, 2014). Furthermore, different leaders display different toxic behaviours, and to varying degrees, with their actions influencing the organisation to different extents (Walton, 2007). This includes displaying toxic behaviours to some followers and not to others, creating a situation of in-groups and out-groups within an organisation, and pitting these two groups against each other, creating organisational divide (Yavaş, 2016)

Schmidt (2008) sought to empirically define TL for the development of the Schmidt Toxic Leadership Scale, using an amalgamation of the literature on TL that was current at the time. Through this task, it was identified that each definition discussed a distinctive characteristic of TL, illustrating that the understanding of the construct is very broad (Schmidt, 2008).

In the Schmidt (2008) study, several recurring themes regarding TL were identified:

1. Toxic leaders are indifferent to the well-being of their subordinates, and may even exacerbate ill-health by being abusive (Flynn, 1999; Lipman- Blumen, 2005; Wilson-Starks, 2003)
2. Toxic leaders micromanage subordinates to the extent that the subordinates' opinions and ideas are smothered (Lipman-Blumen, 2005; Wilson-Starks, 2003).

3. Toxic leaders are narcissistic and display behaviours that are self-centred, have a grandiose sense of self, lack empathy for others, and need to be viewed favourably by other individuals (Schmidt, 2008).

Based on these themes, and further investigation through qualitative and quantitative research, five dimensions of TL were identified: self-promotion, abusive supervision, unpredictability, narcissism, and authoritarian leadership (Schmidt, 2014). A subsequent quantitative study, using exploratory factor analysis, demonstrated that these five dimensions are separate factors, and that they loaded onto the construct 'toxic leadership' - consequently concluding that TL is a multi-dimensional construct that encompasses various forms of destructive behaviour (Schmidt, 2014).

Therefore, it is understandable why definitions provided regarding TL are more akin to a list of behavioural traits exhibited by such leaders (Snow et al., 2021). Jean Lipman-Bluman defines TL as "a process in which leaders, by dint of their destructive behaviour and/or dysfunctional personal characteristics, inflict serious and enduring harm on their followers, their organizations, and non-followers, alike" (Lipman-Blumen, 2010, p.1). According to Smith and Fredricks-Lowman (2019) TL is "a combination of self-centred attitudes, motivations, and behaviours that have adverse effects on subordinates, the organization, and mission performance." These two definitions indicate three things: that TL is a form of destructive leadership, that it has detrimental and long-term effects, and that it affects an organisation and its employees.

Behaviours that a toxic leader can exhibit include, but are not limited to:

- Behaving aggressively towards colleagues (more particularly subordinates) (Steele, 2011)
- Public ridiculing of subordinates (Pelletier, 2010)
- Demoralising subordinates by making them feel inadequate (Whicker, 1996)
- Engaging in workplace bullying (Flynn, 1999; Smith & Fredicks-Lowman, 2019)

- Engaging in intimidation, coercion, manipulation and threats (Flynn, 1999; Mahlangu, 2020; Snow et al., 2021)
- Manipulating the office atmosphere based on their (the toxic leader's) emotional state on any given day (Flynn, 1999)
- Expecting compliance (and sometimes forcing subordinates to comply if they resist) (Lipman-Blumen, 2010)
- Favouritism and using employees as scapegoats (Pelletier, 2010)
- Stifling constructive criticism (Lipman-Blumen, 2010)
- Destroying enthusiasm of subordinates, inhibiting creativity and autonomy, and exhibiting over-controlling behaviour (Middleton, 2018; Wilson-Starks, 2003)
- Displaying a lack of concern for subordinates, and a focus on achieving goals based on self-interest (Reed, 2004)
- Engaging in deceptive behaviour (Green, 2014); and
- Enhancing the way others perceive them at the expense of subordinates (Lipman-Blumen, 2005)
- Engaging in self-serving and arrogant behaviour (Mehta & Maheshwari, 2013)
- Narcissistic behaviour (Middleton, 2018)

For the purposes of this study, TL is defined as an abuse of the subordinate-superior relationship, wherein the superior may employ coercion, intimidation, bullying, deception, and other abusive tactics, such as an abuse of their positional power, to achieve goals (Boddy et al., 2020; Winn & Dykes, 2019). Though it may produce positive results and outcomes for the organisation, TL has been shown to be an extreme stressor within organisations, and it negatively impacts the wellbeing of employees who are directed in such a style.

2.2 History of research on the construct

The term *Toxic leadership* was coined by Marcia Lynn Whicker, in 1996, to describe leaders in multiple fields who displayed destructive leadership styles and behaviours which caused significant levels of harm for subordinates (Asbery, 2015; Schmidt, 2008) The empirical research on TL has its beginnings in the US military. When investigating stress within the army, researchers initially focused on Post Traumatic Stress Disorder (PTSD) and suicide (Winn & Dykes, 2019). However, they began looking beyond the scope of mental illnesses and began focusing on leaders within the military (Winn & Dykes, 2019). It was noted that soldiers were experiencing stress from leaders who were acting destructively and in their own best interest without considering the interests and wellbeing of their subordinates (Winn & Dykes, 2019). When the military became aware of the concept of TL, behavioural strategists discovered that it was prevalent in many military units (Winn & Dykes, 2019).

The studies conducted were empirical. A preliminary search indicated that studies exploring TL in the US military were predominantly qualitative, using thematic analysis in exploratory designs to identify key issues relating to research questions regarding TL and the experiences of subordinates. Other studies that investigated the concept of TL used interviews as well as focus groups as a means of exploring the experiences of soldiers under what they deemed was destructive leadership (Bullis & Reed, 2003; Williams, 2005). The majority of the participants indicated that they had experienced some form of TL within the course of their careers (Williams, 2005).

Once the construct of TL began to be explored within organisations outside of the military, both quantitative and qualitative studies were undertaken and measuring instruments by which TL could be measured, quantitatively, were developed (Schmidt, 2008). In addition, through these studies there was further refinement of what the construct entailed in terms of definition. Initially, most studies were conducted to define TL among an array of destructive

leadership styles (Schmidt, 2014). As mentioned earlier, Schmidt (2014) describes TL a destructive leadership style characterised by narcissistic behaviours, the desire to produce and sustain conditions for one's self-promotion, unpredictability, an abusive supervisory style, and authoritarianism, and this is corroborated by Asbery (2015).

Because TL can be understood as an amalgamation of harmful behaviours, research into its prevalence has been conducted by investigating some of its features, e.g. Workplace Bullying (WPB). WPB has been defined as the perceived systematic mistreatment of employees over long periods of time, against which they have little defense (Branch et al., 2012; Mattheisen & Einarsen 2007).

2.3. Prevalence of toxic leadership

Given the history of the concept, it is unsurprising that TL is widespread. Many researchers recognise the prevalence of TL in various industries (Başkan, 2020; Green, 2014; Mahlangu, 2020). However, TL is found in varying degrees (Green, 2014; Walton, 2007).

Internationally, research confirms the prevalence of TL, shedding light on industries where the interpersonal conflicts within workplaces has created anxiety which, consequently, resulted in detrimental health issues for the employees that were affected (Boddy & Croft, 2016; Fahie, 2019). In the US, the Workplace Bullying Institute reported research which demonstrated that an estimated 35% of American employees experienced bullying within the workforce, and that 72% of the bullies held management positions (Workplace Bullying Institute, 2021). Furthermore, a poll conducted by the Harvard Business Review indicated that of 1000 American employees, 63% felt as though their achievements were not acknowledged by management, 51% of respondents said that their employer refused to speak to subordinates, and 47% of respondents claimed that leadership would take credit for others' ideas or work (Solomon, 2015). These behaviours, as mentioned in this review, are typical features of TL, and could be suggestive of this style of leadership existing in an organisation.

Therefore, these behaviours are used as proxies in instruments to measure TL. If they are experienced regularly by subordinates, they may have detrimental and long-term effects on these employees, and they can affect the entire organisation by, for example, decreasing employee satisfaction – linking this to how TL can be defined according to Smith and Fredricks-Lowman (2019), as behaviours from leadership that are selfish and that can have adverse effects on subordinates which can, in turn, affect the organisation as a whole. These data, gathered from one of the most prominent developed countries in the world, illustrate the severity of the problem on a global scale in private sector organisations.

In South Africa, a survey conducted by CaeerJunction (2019) reported over 3000 South African employees resigned from their work because of their management. From these 3000 employees, 44% of respondents said that their managers showed favouritism, and 18% sought assistance with their mental health because of the mistreatment they experienced at the hands of management (CareerJunction, 2019). Additionally, 58% of the respondents believed that their leadership lacked the appropriate skills necessary for management and planning (CareerJunction, 2019). These responses can be linked to some of the behaviours listed above which are characteristic of TL, therefore the CareerJunction findings could be suggestive of TL.

2.4 The Toxic Triangle

The toxic triangle model was developed by Padilla et al. (2007) and included three elements: destructive leader, conducive environment, and susceptible follower. These elements are supported by the perspective which views the interplay of a leader, environment and followers as the key influences for the types of leadership seen in an organisation, rather than viewing the influence of the individual characteristics of a leader as the only influence (Luthans et al., 1998; Padilla et al., 2007).

Destructive leader

According to Padilla et al. (2007), there are five factors of a toxic leader: charisma, self-serving purposes, narcissism, negative life themes and an ideology of hate.

Destructive leaders are *charismatic* and can be charming, which allows them to build a strong following consisting of individuals who admire them (Pelletier et al., 2019). Consequently, these leaders are given power which they use to achieve their *self-serving goals*. Closely linked to these two factors is *narcissism* which, in a toxic leader, presents as dominance, an unrealistic sense of importance, superiority and uniqueness, entitlement, arrogance and a need for attention (Conger, 1990). Coupled with these characteristics is an autocratic leadership style, and the inability of a narcissistic leader to handle criticism, going so far as to squash dissention (Lipman-Bluman, 2010; Padilla et al., 2007; Pelletier, 2010).

Research suggests that the experience of powerlessness as a child leads to a greater use of manipulation, coercion and a self-serving use of power in adulthood (Goodstadt & Hjelle, 1973). As a result, Padilla et al. (2007) state that the *negative life themes* factor has its origins in early life experiences. However, Pelletier et al. (2019), posit that recent traumatic events also have an effect on the perspective and future actions of a leader. The final factor that Padilla et al. (2007) suggest is associated with a toxic leader is an *ideology of hate*, which influences a toxic leader to view the world in false dichotomies and images of hatred, therefore, the leader creates their vision with the goal of destroying enemies, and the enemy includes those who are viewed as against them as well as those that are elites (although these two groups are not mutually exclusive).

Conducive environment

Environmental conditions contextualise the interaction between leaders and followers, and this context matters as the conditions in which leaders and followers operate influences their interaction. Four environmental factors are proposed by the *toxic triangle* and deemed

important for destructive leadership: instability, perceived threats, poor cultural values and a lack of checks and balances (Padilla et al., 2007; Pelletier et al., 2019).

Turbulence in the internal and external environments of organisations increases the likelihood of the existence of toxic leadership, because followers are more vulnerable as they try to navigate an unstable and unpredictable environment, leaving them susceptible to unknowingly accepting a toxic leader that they, initially, view as strong - not being fully aware of the personality or style of that leader (Pelletier et al., 2019). The *instability* in the environment grants leaders more power, as these conditions require swift action and unilateral decision-making, thus astute leaders can navigate and exploit unstable conditions while avoiding scrutiny from individuals outside the organisation (Padilla et al, 2007; Thoroughgood & Padilla, 2013). Also, although these organisations may operate in environments that are seemingly democratic – autocracy and patriarchy prevail in most environments which also allows the toxic leader to flourish.

An unstable environment complements *perceived threats*, because if the economy is unsteady, employees are more likely to deal with undesirable working conditions so that they can remain employed; even if this means a decrease in salary or an increase in job demands (Pelletier et al., 2019). There are a range of perceived threats, which include feelings of maltreatment to uncertain economic or social situations (Padilla et al, 2007). When employees perceive a threat, they are also more willing to accept more forceful styles of leadership and studies have shown that when feeling threatened, the probability of individuals supporting and identifying with charismatic leaders increased (Nevicka et al., 2013). An example of this can be seen in the Bush administration, as research showed that support for the former United States President, George W. Bush, increased when Americans were reminded of the threat of terrorism (Padilla et al., 2007). Linking this to the *ideology of hate* that is a part of the toxic leader's vision: Once false dichotomies are created, it is easier for

the toxic leader to highlight these threats, and this then is used as a tool by which they can further abuse their power and motivate their followers (Padilla et al., 2007). It is important to note that these threats may not be objective, however, the mere perception of a threat is enough for a leader to gain power (Padilla et al., 2007).

Organisational *culture* refers to how processes, procedures and other aspects are conducted in an organisation, and it includes components such as norms and expectations of behaviour, roles and values of the organisation (Paltu & Brouwers, 2020). Policies, procedures and reward systems indicate to employees the norms and behaviours of the organisation, as they see what types of behaviour is rewarded or punished (Pelletier et al., 2019). Luthans et al. (1998), suggest that destructive leaders thrive in environments where there is a high power distance, and that promote collectivism, and the avoidance of uncertainty (which would encourage followers to seek a strong leader that provides them with hope in unpredictable environments). Collective cultures encourage group loyalty and co-operation, as well as in-group/out-group separation, and these cultures need a strong leader to bring individuals together to create a sense of group identity and unity (Darwish & Huber, 2003). Research indicates that in cultures that promote a high power distance, followers tolerate the power imbalance present in autocratic leadership (Padilla et al., 2007).

With regard to checks and balances, the review of top executive performance is a requirement that needs to be fulfilled by the corporate Boards of directors (Pelletier et al., 2019). However, this is a duty which is often inconsistently carried out, especially for one-off transactions (Vivian et. al., 2014). Top executives are given a lot of freedom regarding how they manage their budget and their personnel, but there is little accountability with regard to their decision-making with their decisions hardly being supervised (Padilla et al., 2007). A *lack of checks and balances* creates ideal conditions in which exploitation and abuse of absolute power can occur, especially in scenarios where independent boards are not used for

inspection or supervision of top executive performance (Thoroughgood & Padilla, 2013). Finkelstein and Hambrick (1990) explain that in management literature, the concept of discretion implies that managers are not completely constricted by institutional regulations. This discretion indicates that toxic leaders are more likely to exist in senior positions, characteristic of little to no supervision, or smaller organisations wherein mechanisms of supervision and regulation are limited (Pelletier et al., 2019). Three of these environmental factors are present within the South African context. These are instability, perceived threats, and a lack of checks and balances.

The South African economy has been severely strained for many years, with the country being declared junk-status, which means that it is below investment grades (Fin24, 2021). The unemployment rate is at an all-time high, with statistics from Statistics South Africa recording 34.4% of the population being unemployed (Business Tech, 14 October 2021; StatsSA, 2021). Even obtaining a tertiary qualification is not a guarantee of employment, as 11% of graduates remain unemployed despite qualifications in finances, laws, supply chain, human resource management and various other disciplines (Mahlangu & Mohlomi, 2021; Stats SA, 2021). 13.8 million South Africans live below the breadline (Business Tech, 9 September 2021). All of these statistics are indications of the current bleak economic climate in South Africa, and speak to the instability of its finances. Such unpredictability and uncertainty increases the vulnerability of the workforce, and makes them easy to manipulate (Padilla et al, 2007; Pelletier et al., 2019; Thoroughgood & Padilla, 2013). The economic instability, and the looming danger of job insecurity breed the perfect environment for perceived threats among the South African labour force. As shown above, in these conditions, employees are more tolerant of mistreatment by leadership in organisations in an attempt to ensure the security of their jobs. Furthermore, this exploitation has gone

unaddressed in organisations, and in the case of this paper, specifically, for schools due to a lack of adequate external supervision.

Schools are to be regulated by government as well as by boards established by the Department of Education (DoE). According to the South African Department of Basic Education (DBE), the DBE is one of the two national departments which share the responsibility of education in the country - the other department being the Department of Higher Education and Training (DHET) (Department of Basic Education, 2021). The responsibility of primary and secondary schools falls to the DBE, while the responsibility of tertiary education and vocational training falls to the DHET (Department of Basic Education, 2021).

The DBE is commissioned to conduct inspections (annually or as required) on the quality of education that is provided in schools across the country; this includes assessing the performance of teachers and institutions overall, based on the standards set in the Constitution of the Republic of South Africa of 1996, and National Education Policy (Government of South Africa, 2021). The DHET was established to ensure that the labour market is equipped with intermediate skills and practical training through quality skills programmes (Government of South Africa, 2021). However, because the government does not operate effectively and is riddled with corruption and insufficient administration, the balances and checks of schools is lacking in rigour (Serfontein & De Waal, 2015). According to Lewis (2011), corruption is an abuse of power, entrusted to an individual(s), for personal gain despite the adverse effects this has on the lives and emotional well-being of the individuals who depend of the integrity of the entrusted authority figure. This definition is strikingly similar to those presented by Lipman-Blumen (2010) and Smith and Fredricks-Lowman (2019) regarding TL.

With the decentralisation of power, appropriate oversight is not carried out by external inspectors and, beyond that, administration systems that are in place do not adequately handle administration (Serfontein & De Waal, 2015). Consequently, schools are left to operate without much external intervention or inspection and, therefore, may be rife with toxicity as the leadership of schools are given free-reign to make decisions without much in the form of accountability (Baxter & Ehren, 2019). Research has indicated that bullying among educators in South Africa is rife, and this is carried out by senior staff members against more junior staff (Batchelor, 2019). However, not much is done to prevent this, illustrating the lack of supervision and indicating that existence of TL is highly likely.

Susceptible followers

Leadership implies followers - even toxic leaders need followers in order to achieve their goals and abuse their power. The *toxic triangle* postulates two types of followers: colluders and conformers (Padilla et al., 2007).

Conformers are passive - they allow for toxic leadership to exist as they allow bad leaders to assume power. This is, according to Padilla et al (2007), due to the follower's immaturity and unmet needs, making these followers vulnerable. Conversely, colluders are supportive of the toxic leader, because the leader's values and beliefs align with that of the colluder, and these values are unsocialised. Also, the colluder is ambitious and supports the view of the toxic leader because it allows the colluder to promote themselves in an initiative consistent with their own perspective (Hadadian & Zarei, 2016). Conformers try to minimise the consequences of not readily supporting the leader, while colluders promote themselves and seek personal guide by aligning themselves with the leader (Mehta & Maheshwari, 2013).

These labels (colluder and conformer) are quite confining, and they do not leave much room for those non-conformers. Therefore, the *toxic triangle* does not fully represent all

employees within an organisation, and although these categories and labels provide a structure and explanation as to why toxic leadership exists and thrives in organisations, enforcing binary distinctions can be problematic because it leaves no room for the nuances of the experiences of all organisational employees (Pelletier et al., 2019). It is also important to note the third possibility of those who keep quiet as they do not want to become targets themselves. In the bullying literature there is reference to bystanders who do not speak out – they are aware of the bullying but keep quiet for fear of becoming targets themselves (Batchelor, 2019; Caponecchia & Wyatt, 2011; De Vos, 2013).

Despite the knowledge that leadership has a strong effect on the performance, behaviour and the well-being of employees, most of the evidence regarding the impact of leadership on employees has a strong focus on performance, failing to pay significant attention to its impact on employee well-being (Grant et al., 2007).
Performance is viewed as a proxy measure of well-being, despite the relationship between well-being and performance being modest at best (Inceoglu et al., 2018). Furthermore, the variable 'satisfaction' (used to conceptualise well-being and health) does not fully encompass all aspects of well-being because it is too narrow to capture the multidimensionality of well-being, as well as its various outcome variables (e.g. sleep quality, thriving) that are related to psychological and physical health (Grant et al., 2007).

The *toxic triangle* illustrates that employees/followers are concurrently part of the creation of toxic leadership, but also suffer from it. However, the lack of research available on the subject means that researchers are not fully aware of this dual experience, especially within the context of South African schools.

2.5 Educational leadership

Educational leadership is a field of study which investigates the outcomes of leadership on schools, and the capability of principles to adequately support, stimulate and

supervise teachers in order for teachers to effectively execute tasks (Başkan, 2020; Bush, 2007; Leithwood, 2005; Leithwood, 2007; van de Grift, 1990). Therefore, an investigation into TL in schools cannot be conducted without understanding educational leadership.

There is debate regarding whether leadership in education warrants a field of its own or if it is merely an extension of research on leadership (Bush, 2007; Heck & Hallinger, 2005). While it is important to conduct research on leadership specific to schools, they are, ultimately, organisations with much of the same issues occurring in the corporate world also existing within schools. However, the unique set of stakeholders (i.e. parents/guardians, students, teachers, and possibly a stronger influence from government) that belong to schools must be considered when investigating organisational issues, as these stakeholders would affect the behaviour of the organisation, which extends to the goals, directions and outcomes of the organisation (Bush, 2007; Swift, 2001). Consequently, it can be argued that educational leadership can be understood as a branch of boarder organisational leadership.

Much like the initial stages of the broader field of organisational leadership, negative leadership was not investigated in educational psychology at first (Başkan, 2020). The focus of leadership in schools was on different kinds of positive leadership. This is also the case in South Africa with researchers and authors in educational psychology. An example of this can be seen in the works of researchers such as Tony Bush, an expert in the field within the South African context of educational leadership. The typology of management and leadership models in his work listed only positive forms of leadership (Bush, 2007). TL was not discussed. In fact, no type of destructive leadership was discussed - almost as if such a style of leadership does not exist.

Many countries, including South Africa, are beginning to recognise the importance of effective leadership in schools, as it affects the quality of education for learners; with governments becoming increasingly aware that a skilled-workforce directly impacts the

competitive edge within the global market, and this skilled-workforce depends on a strong educational foundation (Amanchukwu et. al., 2015; Bush, 2007). Therefore, investigation into aspects which can decrease the effectiveness, and quality of education received by learners, is critical. Researchers are recognising this, hence, the increase in attention to TL, however limited it may be at this stage. This illustrates one of the ways in which the impact of school leaders and, by extension, schools, reaches beyond just the stakeholders of the schools into society at large.

2.6. The outcomes of toxic leadership on the individual and the organisation

The outcomes of TL on employees is both physiological and psychological (Kurtulmuş, 2020) and these outcomes may be interlinked. Research has indicated that the physical wellbeing of employees influences their mental health and vice versa (Hernandez et al., 2018). TL can also impact the organisation as a whole. It threatens the goals of the organisation by creating obstacles that impede the achievement of the organisational goals, the fulfillment of duties within the company, and further deplete organisational resources (Hadadian & Sayadpour, 2018).

With regard to individual psychological outcomes, studies suggest that TL is the cause for anger, anxiety, stress, depression and feelings of discouragement among subordinates (Boddy et al., 2020). Research also shows a link between anxiety, stress and depression, and an increase in the levels of workplace burnout that these employees experience (Maslach, 2001).

There is further evidence suggesting a link between depression, a possible symptom of working under TL, and fatigue (Williamson et al., 2005). Other links have been investigated between stress, anxiety and depression and the prevalence of insomnia (Fernandez-Mendoza & Vgontzas, 2013). The presence of stress indicates cortisol levels, and an increase in cortisol levels has been linked to a decrease in the executive functions of the

brain, which result in impaired problem-solving, reasoning and planning (Blair, 2017; Boddy et. al., 2020). A lack of sleep and stress are linked to general susceptibility to illnesses, such as colds and flus, which can lead to absenteeism in the workplace (Boddy et. al., 2020; Fernandez-Mendoza & Vgontzas, 2013). Apart from the mental and physical effects TL has on employees, it also affects them in ways that impact upon the organisation and how effectively it functions.

While negative leadership produce results (Davis, 2016) these results are often only short term gains. For example, research has shown that these styles of leadership can lead to the achievement of short-term goals (for example, encouraging people to change practices) (Snow et al., 2021). In an achievement-oriented society, organisations are more concerned with *how much* can be accomplished in a short period of time, rather than *how* the goals are accomplished – which is why most organisations will tolerate toxic leaders because they are top performers (Green, 2014). Therefore, despite the awareness of a leader being toxic, they are viewed as being competent, as they are able to get subordinates to deliver (Walton, 2007). Toxic leaders may achieve these results by forcing compliance from employees, and this could be the reason why toxic leaders are still employed, and even rewarded by means of a raise and/or promotion because of the results they are able to produce, despite the harmful manner in which they do so (Middleton, 2018). However, these positive results cannot be maintained for long. In the long term, TL can decrease an employee's job satisfaction, motivation, work engagement, the effort put into the work, productivity, performance, organisational loyalty, and it increases the likelihood of turnover (Hadadian & Sayadpour, 2018; Paltu & Brouwers, 2020; Pearson & Porath, 2005).

The negative behaviours of toxic leaders also foster a toxic environment (Hadadian & Sayadpour, 2018). Reed (2004) describes toxic leaders as a poison that "is often slow acting, so organisations do not realise they are "sick" until it is too late" (cited by Middleton, 2018,

p. 12). Within this environment, interpersonal conflicts can develop, and research shows links between conflict and job stress (Hadadian & Sayadpour, 2018). These interpersonal conflicts can range from minor disagreements among colleagues to serious physical assault - and can either be directly initiated (being overtly rude to colleagues) or indirectly initiated (gossiping about colleagues) (Hadadian & Sayadpour, 2018). TL can also increase job stress through destructive behaviours which include bullying, intimidation, humiliation and sabotage among many other behaviours (Hadadian & Sayadpour, 2018). As mentioned above, job stress impacts employees' mental health, which can impact not only their physical health but also their work productivity, satisfaction and work engagement, all of which can influence the effectiveness of the organisation.

Interestingly, TL can encourage creativity and innovation in organisations because these aspects can be enforced through the organisation's culture (Zaabi et al., 2017) and it is for reasons such as this one that TL often goes undetected by management, because leaders with this leadership style often still deliver excellent results in their department. However, it is important to note that this creativity and innovation is 'enforced' by the TL and in the long-term employees will be unable to sustain such enforcement.

Another possible danger and effect of TL is connected to Social Learning Theory (SLT). The implication of (SLT) is that subordinates will learn the negative, counterproductive behaviours that toxic leaders display and inflict on the subordinates and they will, in turn, begin displaying and inflicting these behaviours on their colleagues and any others that may be subordinate to them, thus, the culture of toxicity begins to permeate and pervade the whole organisation (Boddy et. al., 2020). This is also possible because the environment bred by toxic leaders of unfriendliness, rudeness, and low levels of cooperation tends to become adopted over time as acceptable norms of behaviour for all (Boddy et. al., 2020). A pervasive dysfunctional corporate culture is one of the outcomes of TL (Boddy et.

al., 2020). This environment and culture will allow for toxic behaviour from other employees. Thus, an important point to note is that the effects of employee wellbeing 'seep outwards' from the individual into the organisation and may even seep outside of the organisation into other societal levels (Kowalski et al., 2015).

TL occurs in a wide variety of organisational contexts but more recently, this type of leadership has been investigated in the school context. To date there is very little research about the effects of TL upon teachers in schools, and this is especially true in the South African context.

2.7 The school context

Schools use a bureaucratic structure, with leadership and management roles being distributed among the staff (Christie, 1998; Hatcher, 2005; Hoy & Sweetland, 2001; van Deventer & Kruger, 2011). It is a system of centralised control (Hoy & Sweetland, 2001) where there is a clear hierarchy of power; with most of the power being held at the top of this hierarchy, and the rest of the power being given to a select few from the rest of the staff because of the ranked levels of authority (Christie, 1998; Hatcher, 2005; Hoy & Sweetland, 2001; van Deventer & Kruger, 2011). The head teacher is either a principal or headmaster, while the other leaders are heads of their respective departments.

South African schools hold similar structural features, because of government regulation, regarding who may teach and be taught, categories of teachers' salaries and responsibilities, regulations regarding age for students, the ratio between students and teachers, the syllabus to be taught and a number of other government mandates (Christie, 1998; Williams, 2011). Unfortunately, the problems experienced in South Africa (economic instability, job insecurity, high crime rates etc.) are mirrored in schools, as the community problems spill over into schools (The Public Servants Association, 2019; Winnaar et al., 2018; Wits School of Governance & Bridge, 2016) creating such an environment of tension

that staff in the schools become stressed to the point where they may become bullies and toxic leaders. A combination of a lack of resources and support for teachers, coupled with high demands, leads to such stressful environments that can trigger leaders into becoming perpetrators of bullying, and other forms of toxic behaviour, as they vent their aggression onto others (Batchelor, 2019; Bernstein & Batchelor, 2022; The Public Servants Association, 2019). It is possible that these leaders are innately toxic people, but due to the environment of the schools, the stress can cause this toxicity to manifest or aggravate existing toxic behaviour.

In South Africa, teachers are experiencing significant challenges that are largely a function of the country's education system. General issues among South African schools are a lack of fiscal means and resources (Amnesty International, 2020; Christie, 1998; Hochfeld et al., 2022; Mncube & Madikizela-Madiya, 2014; West & Meier, 2020). These include ill-managed school grounds (gardens and the landscapes), litter in classrooms and on the rest of the school grounds, broken fences, rooms being misused (for example libraries being used for storage instead of learning, because they are the only rooms that can be locked) and vandalism (Amnesty International, 2020; Christie, 1998). Other infrastructural problems include difficulty accessing electricity and clean water, a lack of laboratories and computers, and suitable toilets (Biney, Cooper-Bell & Khumalo, 2022; Hochfeld et al., 2022; Lee, 2023; Mncube & Madikizela-Madiya, 2014). Socially, the issues that occur in the schools include overcrowded classrooms (West & Meier, 2020), difficulty recruiting competent management, violence among students (which usually occurs when teachers are not present) and violence between teachers and students (e,g corporal punishment), substance abuse, thievery, gangsterism, rape and other types of criminality (Christie, 1998; Grobler, 2019; Mncube & Madikizela-Madiya, 2014; Prinsloo, 2005; The Public Servants Association, 2019; Todd & Mason, 2005).

Other issues in the school arise when authority is challenged and disrupted and this occurs among and between principals, teachers and students (Christie, 1998; Prinsloo, 2005; The Public Servants Association, 2019; Todd & Mason, 2005). A general demotivation and low morale exist among teachers and students (Christie, 1998; de Wet, 2010). This can also influence the results of the learners (Christie, 1998) which affects the effectiveness of the entire school.

According to Christie (1998), Swart et al. (2021), Williams (2011), and Wits School of Governance and Bridge (2016), issues that affect teachers include the limited authority that they have; as it causes them to rely on the school hierarchy for support in matters of a disciplinary nature. Teachers also note that they are controlled by the personally chosen design of the principal regarding daily work, the students assigned to teachers, the classes allocated to them to teach, the timetable schedule and the distribution of non-teaching duties (Christie, 1998; Swart et al., 2021; Williams, 2011). Teachers felt underpaid, blamed for the problems at the school, and disempowered and these issues result in their demotivation (Christie, 1998; Swart et al., 2021; Williams, 2011). Christie (1998) and Wits School of Governance and Bridge (2016) noted that the relationships among management, teachers, students and parents were conflictual, which affected the school. Another issue which pressurises teachers, is that their primary role in schools is to teach, however, with national safety frameworks set by the government, teachers also need to be able to identify and possibly assist children who have been victims of abuse, placing the duties and operations of a social worker or psychologist into the hands of teachers who are not trained to do so (Batchelor, 2019; Bernstein & Batchelor, 2022; Grobler, 2019)

Teachers felt victimised by an oppressive system which paralysed them and created a feeling of indifference and dependence on the leaders of the school (Christie, 1998; Lambersky, 2016). These teachers felt unfairly treated by the system, which affected their

ability to perform tasks, and it caused anxiety, stress and dissatisfaction (Christie, 1998; Lambersky, 2016). The unbearable environment stifled innovation and creativity in the teachers (Amtu et al., 2019; Christie, 1998). Other complaints included apathy, depression, impotence, anxiety regarding their physical safety, and a lack of agency (Christie, 1998; de Wet, 2010; Grobler, 2019; Williams, 2011).

Because of the myriad issues experienced in the schools, teaching and learning are no longer prioritised as the schools are engulfed by conflicts, possible aggression and uncertainty that cannot be dealt with in a weak organisational structure (Christie, 1998; Williams, 2011; Wits School of Governance & Bridge, 2016). When principals, teachers and learners focus their energy on the malfunctions of the school, productivity decreases.

Overall, the issues experienced within South African schools are that of very poor physical and social facilities, as well as poor organisational management and structure (Christie, 1998; Mncube & Madikizela-Madiya, 2014; van Deventer & Kruger, 2011; Wits School of Governance & Bridge, 2016). There could also be problems with the relationship between the school and the community (Batchelor, 2019; Bernstein & Batchelor, 2022; Madikizela-Madiya, 2014; Prinsloo, 2005; The Public Servants Association, 2019) as the school is not a closed entity, but susceptible to problems in the community such as poverty, unemployment, low-income employment and violence in the community which can seep into the schools (Madikizela-Madiya, 2014; Prinsloo, 2005; Williams, 2011; Winnaar et al., 2018). These issues can be exacerbated by poverty, therefore, schools in poorer areas in particular, may suffer from these issues more than schools in more affluent areas.

Amidst all of this, teachers are also expected to endure the destructive and often times, unbearable work environments created by toxic leaders (de Wet, 2010). The prevalence of TL can be attributed to the conducive environments in which it breeds. Research shows that organisational culture and environment are part of what aids in the

thriving of this kind of leadership (Kurtulmuş, 2020). If instances of abuse, workplace bullying, violence, micromanagement or a complete lack of management and other counterproductive behaviours such as tardiness, absenteeism and destruction of organisation property exist in a school, then TL can also find a place within which to flourish. It is suggested by de Wet (2010), that South African public workplaces are both psychologically and physically toxic, and that South Africans experience abnormally high levels of workplace hostilities. Other issues that make South Africa one of the most stressful countries to work in, according to Burton (2001), is the rapid social and political change, economic instability, unrealistic expectations, and the feelings of disempowerment. This can be applied to schools, and particularly public schools, in South Africa. Toxic leaders are also working under these unbearable pressures, which can cause extreme levels of stress. This may result in these leaders using their staff as scapegoats (Pelletier, 2010), blaming them and abusing them for all the difficulties and pressures experienced in the workplace.

2.8 Societal outcomes

As mentioned above, TL does not only impact the individual and the school/organisation but its effects seep out and it spreads its toxins into the community. Schools form part of communities, which means that each entity can affect the other. The socioeconomic conditions of the community, such as unemployment, low-income employment, poverty and poor living conditions, will impact the school (Christie, 1998; de Wet, 2010; Mncube & Madikizela-Madiya, 2014; Prinsloo, 2005; The Public Servants Association, 2019; Winnaar et al., 2018; Wits School of Governance & Bridge, 2016). Because of this, problems from the community can spill over into schools and vice versa (Batchelor, 2019; Batchelor & Bernstein, 2022). Community violence threatens the safety of students and staff, narcotics and alcohol are sold through school fences (Mokwena & Setshego, 2021), gangsterism is rife all-over South Africa, and can impact the students who

are recruited (Christie, 1998; de Wet, 2010; Mncube & Madikizela-Madiya, 2014; News24, 2019; Petrus, 2021; Prinsloo, 2005;). Additionally, some wars between gangs can become very violent and there have often been shootouts and knifings inside schools between students who are members of different gangs, and outside the schools (Mncube & Madikizela-Madiya, 2014; Petrus, 2021).

In such unsafe schools the potential for a poor school environment seeping out negative effects in the community are, thus, higher. According to Prinsloo (2005), 'safe schools' are characterised by secure walls, fencing and gates, buildings that are in good condition, and well-maintained school grounds. These schools have a good system of discipline in place, with a culture and environment conducive to teaching and learning (Hochfeld et al., 2022; Mncube & Madikizela-Madiya, 2014; Prinsloo, 2005; The Public Servants Association, 2019). Educators conduct themselves professionally, and the school is managed and governed well. There are low levels of absenteeism (from both teachers and students) and low levels of crime and violence (Mncube & Madikizela-Madiya, 2014). In safe schools there is less potential for fear of ridicule or humiliation, intimidation, harassment or violence to occur (Mncube & Madikizela-Madiya, 2014).

These characteristics of 'safe schools' were developed using the various rights, that are part of South Africa's constitution, which protect the physical and psychological safety of children (Prinsloo, 2005). These rights include Child Care Act 74 of 1983, the Domestic Violence Act 116 of 1998, South African Schools Act 84 of 1996, and Occupational Health and Safety 85 of 1993 (Prinsloo, 2005). However, the amount of violence, abuse, fiscal constraint and school facilities in a poor state of repair indicate that these rights are not being promoted, protected or upheld within schools or the community (Christie, 1998; de Wet, 2010; Mncube & Madikizela-Madiya, 2014; Prinsloo, 2005; The Public Servants Association, 2019).

Because teachers and students are part of the community, they can impact it; therefore, conditions in schools affect the community. In schools that are already under societal pressure, where toxic leadership can thrive, teachers are psychologically damaged and physically unwell (Batchelor, 2019; de Wet, 2010). This depletes their effectiveness as educators, which affects the entire schooling system at large as teachers may be disengaged and, therefore, not fully committed to educating their learners (Batchelor, 2019; Branch et al., 2013). Thus, the whole quality of schooling and the education of learners on a broad community scale declines in a downward spiral. This then feeds into the cycle of poverty and violence, as learners are not educated and not protected from socioeconomic ills.

The extent to which schools can resist the ever-present violence depends on the degree to which the school is well-organised and capable of caring for and protecting its staff and students with a clear safety and security protocol (Mncube & Madikizela-Madiya, 2014). Research suggests that the more effectively a school runs, the less chance there is of the school experiencing violence from the external community, and violence generated on the school's premises (Mncube & Madikizela-Madiya, 2014). A well-run school with a culture of inclusivity and democracy can create a sense of commitment and responsibility in all the members of the school (students and teachers) (Mncube & Madikizela-Madiya, 2014; Wits School of Governance & Bridge, 2016).

It should be noted that poverty and poor resources do not *always* negatively affect the way a school functions (Mncube & Madikizela-Madiya, 2014). If schools are underfunded, but they are organised, they can reduce the occurrence and impact of violence within schools, and this can, in turn, reduce the negative influence on the community. However, the general point to be made here, is that in unsafe schools and environments the community problems spill into schools, the negative impact on schools impacts upon learning and spills back into the community, and the cycle of negativity spirals further. Additionally, in such an

environment where conditions are very poor, the potential for toxic leadership becomes more likely.

Consequently, based on the above review on the literature and the strong potential of TL in schools to have negative effects on teachers, learners and the broader community, the present study aimed to examine the construct of TL in South African schools by reviewing current research done and by consolidating findings, primarily, to recommend areas within this context that can be researched in future, and, secondarily, to inform future policy and practice. Such a review is of great importance given the extremely deleterious outcomes that can ensue for teachers, learners, schools and the broader community, if TL within schools is not addressed. The aim of this study is thus to undertake a scoping review of the literature on the experiences of teachers under TL in South African schools, and the psychological effects thereof. The methods are outlined in detail below.

Chapter 3: Methods

This section will discuss the protocol used in this scoping review, the authors' information, the eligibility criteria, the information sources, the search, and how the sources of evidence were selected, the data charting process, the data items, the critical appraisal of individual sources of evidence, and the process used to synthesise the results.

3.1. Protocol and registration

Different approaches are developed because various forms of evidence present different types of review purposes and questions that require designs that are more suited to effective and rigorous synthesis of the kind of evidence being gathered (Peters et al., 2015). Scoping and systematic reviews are two different types of review designs. A systematic review employs a plan and search strategy that is established beforehand, and is clear and thorough, whereas a scoping review is not as exhaustive as it provides an overview of a topic. However, it is important as it is conducted before a systematic review to determine whether a systematic review of the topic should be conducted (Laher & Hassem, 2020). Also, scoping reviews can be useful when investigating emerging evidence when more specific questions have not yet been posed or effectively addressed, and can also be used independently to examine broad topics and identify gaps in the research, explain important concepts, and report on the varying forms of evidence used to address and inform practice (Laher & Hassem, 2020; Peters et al., 2015). For these reasons, a scoping review was utilised, using the Joanna Briggs Institute (JBI) scoping review guide (2020 JBI Guide) developed in 2020 (Peters et al., 2020a) which employs the 2020 PRISMA-ScR.

The protocol used was the 2020 JBI Guide. This guide is the updated version of the 2017 JBI Guide (Peters et. al., 2020a). The latest version of this scoping review protocol was updated with changes that correspond to the latest methodological developments, and this was determined by the JBI methodology group and the JBI scientific committees (Peters et. al., 2020a). The developers of the 2020 JBI Guide wanted to ensure that this version of the

JBI scoping review guide incorporated all the changes that had been discussed in the 2018 PRISMA-ScR protocol (Peters et. al., 2020a).

The 2020 JBI Guide that was adapted excludes 5 items that are found in the original 2017 PRISMA-ScR (Peters et. al., 2020b). This was done because the developers of the 2020 JBI Guide found that these items were not relevant and they did not suit the purposes of a scoping review, as stipulated by the JBI, as the 2017 PRISMA-ScR was developed for systematic reviews (Peters et. al., 2020b). However, the 2020 JBI Guide developers modified all the items from the original 2017 PRISMA-ScR to ensure that they were appropriate for a scoping review (Peters et al., 2020b).

Although scoping reviews can be registered (Peters et. al., 2020a), because this research report was a requirement for the completion of the Masters in Organisational Psychology Degree (by coursework and research), the registration of this review was not deemed necessary.

The 2020 JBI Guide provides more emphasis and examples regarding how the results of a scoping review should be presented, as well as providing more guidance of what a scoping review can and cannot do, and emphasises that the purpose of a scoping review is not to inform policy or practice or make recommendations regarding these (Peters et. al., 2020a) although, for the purposes of this study, a few recommendations will be made.

According to the 2020 JBI Guide, before conducting a scoping review, a protocol needs to be developed (Peters et. al., 2020a). This provides a map to the development of the scoping review by having specific steps for each stage of the completion of the review, and it will also limit the potential of any reporting bias in the review. It is also possible to register the protocol on Open Science Framework or with Figshare (Pollock et al., 2021). However, as previously mentioned, this was not deemed necessary as this review is part of the

requirements for the Masters in Organisational Psychology degree (by coursework and research).

Any deviations from the method should be noted and explained in the final scoping review, however, because of the iterative nature of scoping reviews, there is a strong possibility that there are changes in the method and deviations from the original protocol (Peters et. al., 2020a). The 2020 JBI Guide accommodates these changes by recommending that any changes to the initial protocol are recorded (Peters et. al., 2020a).

This protocol was chosen because it clearly addressed the need for this method of synthesizing information to be thorough, transparent and reliable, and it was updated very recently (Peters et al., 2020a) therefore, containing the latest insights into scoping reviews. It was also chosen by the reviewers as it provided an extended guide (PRISMA-ScR) based on the 2018 Preferred Reporting Items for Systematic Reviews (PRISMA) Statement, that is designed specifically for scoping reviews, and developed by experts in scoping reviews and evidence synthesis, and this included members of JBI (Peters et. al., 2020a). The PRISMA-ScR is also consistent with the JBI methodology for scoping reviews.

3.2 Authors' information

This step is a deviation from the PRISMA-ScR, however, as stipulated by the JBI scoping review protocol, at least two reviewers must be involved in this review to reduce reporting bias (Peters et al., 2020a). The names, institutional affiliations and email addresses must be included. The two reviewers of the present study were Professor Colleen Bernstein (*Associate Professor, Lecturer and Master's Program Coordinator, Registered Industrial Psychologist (HPCSA), Department of Psychology, School of Human and Community Development, University of the Witwatersrand* - Colleen.Bernstein@wits.ac.za) and Miss Erin Van Wyk (*Student at University of the Witwatersrand, and Registered Student Psychologist (HPCSA)* - 1616193@students.wits.ac.za).

3.3. Eligibility criteria

Studies that were included in this review were quantitative, qualitative and mixed methods studies published in English after the year 1994, as they are relevant to the current political climate of South Africa. It should, however, be noted that no relevant studies were identified before the year 2000. Also eligible for inclusion are articles considered grey literature. According to Benzies et. al. (2006) grey literature is open source information that is available to the public, and can be gathered either internationally or domestically and is not necessarily distributed by ordinary systems of publication.

The study sample was any teacher, working in South African schools, that was exposed to a toxic leader. Personal accounts as well as quantitative evidence in studies that assess proxies of toxic leadership (such as workplace bullying from the principal or any senior staff member) constituted the construct of toxic leadership experience in this study. Because of the cyclical process of scoping reviews (Arksey & O'Malley, 2005; Uman, 2011) these criteria were subject to change. Therefore, the study sample extended to include university lecturers, working in South African universities, that were exposed to a toxic leader. Because of the restrictions of the pandemic, and the nature of this review, the sampling strategy was pragmatic (Field, 2013). The existing knowledge was analysed, allowing for recommendations and implications for future research. Table 1 below lists the inclusion and exclusion criteria.

Table 1

A summary of the inclusion and exclusion criteria used to identify relevant studies

Inclusion criteria	**Exclusion criteria**
Quantitative, qualitative and mixed methods studies/literature	Books and/or articles published within books
Literature/studies written in English	Articles that needed to be purchased
Grey literature	Articles that could not be ethically acquired
Literature/studies published from 1994 to 2022	Articles published before 1994 and after 2021
Literature/studies with samples that included teachers/educators that were victims/targets of TL	Literature/studies that do no investigate TL or indicators of TL
Literature/studies conducted within the context of South African schools	Literature/studies conducted outside of South Africa
The sample was extended to include university lecturers working with South African schools that were victims/targets of TL	Literature/studies that do not explore the psychological effects of TL or the experiences of teachers/educators under TL

3.4. Information sources

With the aim of being as comprehensive as possible, relevant studies were identified in this data gathering stage, using the title, aims and research questions to determine the inclusion criteria of this review, as there needs to be a clear correlation between these elements and the inclusion criteria (Daudt et al., 2013; Peters et al., 2015).

In accordance with JBI types of reviews, three steps were followed to identify relevant studies: 1) using EBSCOHost, Psychological and Behavioural Sciences Collection, Academic Search Ultimate, PsycInfo, and Google Scholar, a limited search regarding TL in South African schools was conducted as these databases are relevant to the field of psychology (Lockwood et al., 2019; Peters et al., 2015). 2) This was followed by an examination of the key words used in the title and abstract of retrieved papers, and of the index terms used to describe the articles (Peters et al., 2015). 3) A second search was conducted using the keyword and index terms identified on the same databases, and, finally, the search was supplemented with the scanning of reference lists of articles to identify further studies that may have been relevant (Peters et al., 2015).

3.5. Search

The search strategy was developed and executed by the primary reviewer (Erin Van Wyk), and was reviewed by the secondary reviewer (Prof. Colleen Berstein). Using the guidelines set by the research questions, this step identified relevant, published studies, and the aim of the process was to be as thorough as possible (Daudt et al., 2013). Consequently, in accordance with JBI types of reviews, three steps were followed to identify relevant studies: First, using EBSCOHost (eBook Open Access (OA) Collection (EBSCOhost)), Psychological and Behavioural Sciences Collection, Academic Search Ultimate, APA PsycInfo, and Google Scholar, a limited search regarding TL in South African schools was

conducted as these databases are relevant to the field of psychology (Lockwood et al., 2019; Peters et al., 2015).

The following steps were conducted for the initial limited search on Google Scholar:

1. Using BOOLEAN operators - key words “toxic leadership” and “schools” and “South Africa” - 234 articles were found, but only 1 was relevant
2. The key words were changed to “toxic leadership” and “education” and “South Africa”- 387 articles were found, but only 4 were relevant.
3. The key words were changed to “toxic leadership” and “teachers” and “South Africa”- 197 articles were found, but none of them were relevant.
4. Key words were changed to “toxic leadership” and “school principals” and “South Africa” - 45 articles were found, but none of them were relevant.
5. Due to the small number of articles being found using the search term “toxic leadership” the primary reviewer made the decision to look for articles using an easily distinguishable indicator of TL - therefore, the term “workplace bullying” was used in place of “toxic leadership”
6. Key words were changed to “workplace bullying” and “schools” and “South African”- 1290 articles were found. However, this number was very large and, therefore, search terms were changed again to narrow the number of articles found.
7. Following the large number of articles found in the previous search, key words were changed to "workplace bullying" AND "schools" AND "South Africa" AND "psychological effects" - 170 were found, but only 5 were relevant.
8. Using BOOLEAN operators - key words “toxic leadership” and “schools” and “South Africa” and “head of department” were searched - about 23 results were found, but none of them were relevant.

9. Using BOOLEAN operators - key words “workplace bullying” and “schools” and “South Africa” and “head of department” were searched - about 87 results were found, 10 of which were relevant, however only 2 new articles were found while the other 8 had already been retrieved.

The following steps were conducted for the initial limited search through the University of the Witwatersrand’s online library:

1. The “Databases” tab on the homepage was selected
2. The “EBSCOHost” database option was selected
3. “Academic Search Ultimate”, “APA PsychInfo” and “Psychology and Behavioral Sciences Collection” were also selected as databses
4. Using BOOLEAN operators, the key words “toxic leadership” and “South Africa” were searched - 4 results were found, however, only 1 article was relevant. Due to difficulties in access to the article, it could not be included in the review.
5. Using BOOLEAN operators, the key words “toxic leadership” and “South Africa” and “head of department” were searched - no results were found.
6. Using BOOLEAN operators, the key words “workplace bullying” and “South Africa” and “education” were searched - 9 results were found, however, only 4 were relevant, and these 4 were already retrieved in the initial Google Scholar search.
7. Using BOOLEAN operators, the key words “workplace bullying” and “South Africa” and “principals” were searched - 3 results were found, all 3 were relevant, however, they were already retrieved in the Google Scholar initial search.
8. Using BOOLEAN operators, the key words “workplace bullying” and “South Africa” and “head of department” were search - no results were found.

The number of relevant published articles that were identified was used as a guide regarding the degree of intensity by which the grey literature search would be conducted, as the search of published articles was used to indicate the popularity or prevalence of TL in schools and its effects on teachers. Because of the limited number of relevant published articles that were identified, a basic grey literature search was conducted. However, if a substantial number of articles was identified in this search, a more extensive search (similar to the one conducted for published papers) would have been conducted.

The grey literature search was conducted on Google, Google Scholar, and Worldcat as these websites have a collection of international grey literature. Therefore, the likelihood that they stored South African articles, that may be relevant, was considered greater.

The following steps were conducted for the grey literature search on Google:

1. Using BOOLEAN operators, the key words "toxic leadership" and "teachers" and "educators" and "South Africa" were used to identify relevant studies on Google. There were approximately forty-one-million-five-hundred-thousand results for this search. A preliminary examination of the first two pages of results showed that articles discussing the concept of "teacher leadership" were being suggested. As this type of leadership does not directly relate to TL, the decision was made by the research team to exclude the "teacher leadership" from search results.
2. Therefore, the BOOLEAN operators were adjusted to specify 'not "teacher leadership"'. This generated approximately 498 results, however, none of this grey literature was relevant.

The following steps were conducted for the grey literature search on Google Scholar:

1. The same key words ("toxic leadership" and "teachers" and "educators" and "South Africa" not "teacher leadership") from the previous search were entered into Google Scholar. 4 results were generated. Similar to the previous grey literature search, these

results were not relevant literature. Therefore, no relevant literature was found in this search.

The following steps were conducted for the grey literature search on WorldCat:

1. Using the key words “toxic leadership” “schools” and “South Africa” in WorldCat, approximately 440 results were found, however, none were relevant.

Therefore, from this search, of both published and grey literature, a total of 12 articles were found.

The search for relevant published and grey literature was followed by an examination of the key words used in the title and abstract of retrieved papers, and of the index terms used to describe the articles (Peters et al., 2015). The key words and index terms used for each article were either similar to the words used in the initial search (e.g. “toxic leadership”, “workplace bullying”, “teachers”, “educators”, “principals” and “South Africa”) and, therefore, conducting another search using these terms would have been redundant, or the words did not relate to this study and would, therefore, not have been useful to search.

Finally, the reference list of all retrieved papers was analysed to identify further relevant studies (Peters et al., 2015). Five possibly suitable studies were found in this search, adding to a total of 17 studies. However, upon further inspection of the population and/or construct(s) under investigation in the study, it was found that only 13 out of the 17 articles were suitable for this study. It was found that the 4 studies deemed unsuitable either did not sufficiently investigate TL or the samples did not directly relate to educators, but rather all the staff in an educational institution. Lastly, after a final review of all 13 identified sources, it was decided by the primary reviewer that one article was not eligible for inclusion as it did not adequately explore the psychological effects or experiences of teachers/educators under TL. This resulted in a total of 12 selected sources of evidence. Important information extracted from these articles can be seen in Table 2 below (page 62).

Because the key words used in the search included common words such as “teachers”, “educators”, “schools” and constructs that exist beyond the context of this review such as “workplace bullying”, many of the results generated in the searches were articles which included these terms, but which were not related to the research questions of this review. There were also cases where studies that were conducted in other countries were generated in the results of the search, and because this goes beyond the inclusion criteria of this review, these studies were not included. However, to record each article that was removed for these reasons was not deemed necessary, as it would unnecessarily increase the page number of this review. Furthermore, the primary reviewer highlights that many studies that could have possibly been included in this review had to be purchased or could not be accessed ethically. Therefore, these studies were not included.

3.6. Selection of sources of evidence

Sources of evidence were chosen for charting if they explored the experiences of educators under toxic leaders, and if the effects were detailed. Data from the articles was charted manually by the primary reviewer, and each article was analysed for the following information:

1. Research questions
2. Population
3. Concept
4. Context (province)
5. Number of participants
6. Age
7. Gender
8. Year of publication

It was decided by the primary reviewer that charting data regarding the location of each study was not necessary, as all selected sources of evidence were South African.

The results of the charting process were reviewed by both reviewers, and the process was completed jointly by these two reviewers to determine which variables should be extracted. However, as this research was a partial requirement of the Master's degree for the primary reviewer, the primary reviewer was assigned the task of charting the data. The secondary reviewer thus oversaw and checked the charting process once it was completed by the primary reviewer.

The form used to chart the data extracted from each selected source of evidence was developed by the primary reviewer. It was developed using Microsoft Excel, and is presented in tabular form in Table 2 (page 62). There was no need to test the form as it only required the primary reviewer to manually extract data present in each chosen source and input that data into the relevant columns. Furthermore, because there were only 12 sources of evidence selected, there was no need to employ a programme to complete the task automatically.

Once the data was extracted and charted, the secondary reviewer would assess the data to verify it. Both reviewers would then discuss the results and from these discussions, the primary reviewer would continuously update the data-charting process in an iterative process. Inconsistencies were resolved both manually, by the primary reviewer (for example, the removal of any duplicates).

Because of the small number of relevant articles identified, the process of analysing and charting data manually was appropriate. The data were verified by both reviewers by way of proofreading to ensure that the data were relevant to this study's research questions, and to ensure that the data in each chosen source of evidence corresponded with the purposes of this study. Any disagreements between reviewers were settled through discussions between the two reviewers.

As previously mentioned, revisions were made to the chosen data, as it was found, upon further inspection of the data, that certain studies did not investigate the population or constructs necessary to answer the research questions of this study. Therefore, to chart this data would not suit the purpose of this study.

3.7. Data charting process

The data charting form was developed by the primary reviewer. The information extracted from the included sources of evidence was based on the study title, author, research questions, year of publication, number of participants, population, concept, context, age, gender, and key findings of each article (as listed in Table 2).

The study title was charted because the title of selected sources of evidence was used by the primary reviewer as a way to first identify relevant studies. If the title mentioned teachers/educators, TL, workplace bullying, principals or heads of department, the primary reviewer would investigate the study further to determine if it was relevant to this review.

Authors' names were charted as additional information which may be interesting if certain authors (such as Corene de Wet) were more active in investigating this area of research. However, it should be noted that de Wet is active in investigating the construct of workplace bullying and not TL.

The research questions were charted to provide the primary reviewer with the focus of the selected sources of evidence, and to assess if they investigated the concepts relevant to this review i.e. teachers/educators experience of TL and the psychological effects this had on them.

The year of publication was charted to determine if identified sources of evidence fell within the range stipulated by the reviewers of this paper (from 1994 to 2021). The number of participants was charted for reviewers to determine how large sample sizes are to highlight the possibility of bias from smaller samples.

The population was charted because, for the purposes of this study, the reviewers needed to make sure that the population was in fact teachers/educators employed in any of the three levels of education (primary, secondary and tertiary) that had experienced TL in South Africa.

The main concept of each article was charted to ensure that selected sources of evidence investigated the concepts relevant to the research questions of this review that is, TL or its proxies perpetrated by leaders against teachers.

The primary reviewer charted the context of each selected source of evidence to determine if the frequency of TL experienced by teachers was higher in certain provinces.

The age and gender of participants was charted by the primary reviewer as additional information as the reviewers wanted to allow for the identification of a link between these two social identities and teachers/educators that are victims of TL (if this link existed). As mentioned previously in this review, junior employees are more likely to be victimised by more senior employees, therefore, the reviewers wanted to allow for that connection to be identified. Furthermore, in some studies, female participants believed they were victimised based on their gender (Human-van der Westhuizen, 2012; Jacobs & de Wet, 2015) so the gender of participants was also noted in the charting process.

3.8. Data items

Data was extracted based on characteristics - country (South Africa), population (educators/teachers) and the psychological effects as well as any details given by participants regarding their experiences under toxic leaders.

The variables for which data were sought, that were used as the BOOLEAN operators are:

1. Toxic leadership

As discussed previously, TL is the construct under investigation in this review, and is defined in this review as an abuse of the subordinate-superior relationship, wherein the superior may employ coercion, intimidation, bullying, deception, and other abusive tactics, such as an abuse of their positional power, to achieve goals (Boddy et al., 2020; Winn & Dykes, 2019).

Due to the lack of relevant studies identified using the term “toxic leadership” the assumption was made that workplace bullying would be the easiest indicator of TL within educational institutions. This was because workplace bullying involves the persistent perceived negative treatment of one party from another party (de Wet, 2011; Matthiesen and Einarsen, 2007). This negative treatment can include behaviours which identify TL such as intimidation, coercion and manipulation, behaving aggressively towards a colleague, and engaging in deceptive behaviour (Green, 2014; Mahlangu, 2020; Snow et al., 2021; Steele, 2011). However, articles identified as suitable for inclusion needed to discuss the bullying of subordinate teachers by leadership (principals and heads of department) in South African schools and, as previously discussed, this is where the distinction between TL and workplace bullying lies: workplace bullying can occur *between* subordinate teachers (de Wet, 2011), but workplace bullying *from a leader or superior* constitutes TL.

2. Workplace bullying

Workplace bullying is the persistent perceived mistreatment of one colleague by another colleague, which negatively affects the victim of the mistreatment (Agervold, 2007). As discussed previously, the assumption was made that if workplace bullying occurred

between a subordinate teacher and school leadership (principal or head od department/superior) it can be an indicator of TL.

3. Teachers/ Educators

A teacher/educator is defined in this study as an individual that teaches or educates students, and is qualified to do so. This study included teachers and educators at any level of educations (primary, secondary and tertiary), therefore, literature which included lecturers as part of the sample were also considered suitable for inclusion.

4. Head of Departments/ Principals

A Head of Department, in the context of this study, is an educator or teacher that leads a department according to a particular subject taught in the schools (for example, the Head of Department for English or History). A principal, within the context of this study, is defined as the most senior member within a school.

5. South Africa

The Republic of South Africa is the country of origin for all included studies. No restrictions were made regarding provinces or districts within the country, as the reviewers wanted to allow a broader criterion for inclusion, as even fewer studies would have been identified had the search been restricted to specific provinces or districts.

6. Education

For the purposes of this study, education is the term used for the field of occupation inhabited by teachers and educators, therefore, referring to the overall institution of teaching.

7. Schools

In this study, schools are defined as organisations that have objectives, specific standards and hierarchical structure in which labour related to education is divided among employees (Hoy & Sweetland, 2001) however, schools also have unique stakeholders (e.g. students, parents) (Bush, 2007).

8. Psychological effects

Any effects on a teacher's/educator's mental health constitutes a psychological effect. Examples of such effects are anxiety, stress, depression and feelings of discouragement, burnout and insomnia (Boddy et al., 2020; Fernandez-Mendoza & Vgontzas, 2013; Maslach, 2001).

The search did not include the variable "experience" as it was clear from the search that qualitative studies included discussions regarding the participants' experiences either with TL or workplace bullying. However, for this study, "experience" is defined as the insights that teachers/educators share in interviews or questionnaires that provide further details into their perceived mistreatment.

3.9. Critical appraisal of individual sources of evidence

According to the adjusted PRISMA-ScR, developed by the 2020 JBI Guide developers, because a critical appraisal of individual sources of evidence was not relevant to the scoping review objectives, it was not necessary to provide a rationale for conducting a critical appraisal of the included articles, to explain the methods that were used in the articles or to explain the manner in which the information was used in the data synthesis process (Peters et al., 2020a).

3.10. Synthesis of results

The information regarding the findings from each selected source of evidence, that were relevant to this review's research questions, were extracted manually by the primary reviewer. The results for the most common and less common psychological effects and experiences are listed. It was decided by the research that the most common psychological affects must appear in at least six selected sources of evidence. Any effects that appeared in less than five sources of evidence were considered less common. Because of the myriad

unique types of experiences described by participants in the selected sources, any common experiences that appeared in at least four selected sources were reported on in this review.

No systematic reviews were identified in the search and, therefore, there was no need to chart studies from systematic reviews that met the inclusion criteria. The information is presented in visual representation (tabular form in Table 2) as well as narrative format (when detailing the different experiences of educators).

Chapter 4: Results

This section of the review will discuss the selection of sources, the characteristics of sources of evidence, the results of individual sources of evidence, and present the data.

4.1. Selection of sources of evidence

The results of the literature search, the number of articles screened, the duplicates that were removed and the final number of selected sources of evidence is presented in the flow diagram in the appendices (Peters et al., 2020a). The 2020 PRISMA flow diagram for new systematic reviews of databases and registers only was used as a guide to develop the flow chart used in this review (See Appendix B).

4.2. Characteristics of sources of evidence

This step, according to the 2020 JBI Guide's adjusted PRISMA-ScR, is reserved for describing the characteristics of each source of evidence (Peters et al., 2020a).

The first selected source of evidence is titled 'The professional lives of teacher victims of workplace bullying: A narrative analysis' by de Wet published in 2011 (de Wet, 2011). It employed a qualitative research method. The research question for this study was: How do teachers who have been bullied over an extended period of time make meaning of their professional lives and what are the implications thereof for their identities, relationships and future? The population was secondary school teachers. The main concept under investigation was workplace bullying, and the context was not specified. There were 2 participants, the ages of whom were not specified. One participant was male, and the other female, both of which were bullied by their school principals (de Wet, 2011).

The second selected source of evidence is titled 'The Role of the EAP in Addressing Workplace Bullying in a School System' by Lesch published in 2020 (Lesch, 2020). It employed a qualitative research method. The research question for this study was: What is the role of the EAP offered at a primary school to assist teachers in managing workplace

bullying? The population was primary school teachers, the main concept under investigation was workplace bullying, and the context was the Western Cape. There were 13 participants, the ages of whom were as follows: One participant was 24 years' old, one participant was 36 years' old, one participant was 38 years' old, one participant was 45 years' old, four participants were 47 years' old, one participant was 48 years' old, one participant was 52 years' old, one participant was 53 years old', and two participants were 54 years' old. Three participants were male, and 10 were female. These participants were bullied by their principals and HoDs (Lesch, 2020)

The third selected source of evidence is titled 'Educators' understanding of workplace bullying' by de Wet published in 2014 (de Wet, 2014). It employed a qualitative research method. The research question for this study was: What is the experience of educators as victims and/or onlookers of bullying? The population was teachers at all levels of education, the main concept under investigation was workplace bullying, and the context was the Free State. There were 59 participants, the ages of whom were as follows: 11 participants were 30 years' old and younger, 20 participants were 30-40 years' old, 23 participants were 41-50 years' old, three participants were 50 years' old. Fifteen participants were male, and 44 were female (de Wet, 2014).

The fourth selected source of evidence is titled 'The nature of workplace bullying experienced by teachers and the biopsychosocial health effects' by de Vos and Kirsten published in 2015 (de Vos & Kirsten, 2015). It employed a qualitative research method. The research questions for this study were: 1. What is the nature of workplace bullying experienced by teachers in South African schools? 2. What are the biopsychosocial health effects that may stem from such experiences? The population was primary school teachers, the main concept under investigation was workplace bullying, and the context was all over the country, predominantly Gauteng and North West Province. There were 27 participants,

the ages of whom were not specified. The gender of only 25 participants was identified as one male and 24 females (de Vos & Kirsten, 2015).

The fifth selected source of evidence is titled 'Teachers' experiences of conflict with school principals: The impact on teachers, teaching and learning' by Kaloo published in 2014 (Kaloo, 2014). It employed a qualitative research method. The research questions for this study were: 1. What are the experiences of teachers who have had conflicts with principals and how does it affect them? 2. How does conflict between teachers and principals affect teaching and learning? The population was secondary school teachers, the main concept under investigation was conflict with school principals, and the context was KwaZulu-Natal. There were six participants, the ages of whom were not specified. The gender of the participants was not specified (Kaloo, 2014).

The sixth selected source of evidence is titled 'Teachers' Experiences Of Workplace Bullying In Independent Schools' by Mollema published in 2018 (Mollema, 2018). It employed a qualitative research method. The research questions for this study were: 1. How do teachers experience workplace bullying in independent schools in Gauteng? 2. How do teachers define and describe bullying? 3. How do teachers deal with being bullied? 4. How does bullying affect those who are bullied? 5. What, if any, support is provided by schools for teachers who are bullied? The population was not specified, the main concept under investigation was workplace bullying, and the context was Gauteng. There were 6 participants, the ages of whom were not specified. One participant was male, and 5 were female (Mollema, 2018).

The seventh selected source of evidence is titled 'A quantitative exploration of the effects of workplace bullying on South African educators' by Jacobs and de Wet published in 2015 (Jacobs & de Wet, 2015). It employed a quantitative research method. The research questions for this study were: 1. What are the effects of WPB on victims of bullying? 2.

How are different groups of victims affected by WPB? The population was teachers at all levels of education, the main concept under investigation was workplace bullying, and the context was the Free State. There were 850 participants, the ages of whom were as follows: 187 participants were 30 years' old and younger, 360 participants were 31-50 years' old, 303 participants were older than 51 years' old. One hundred and thirty participants were male, and 710 were female (Jacobs & de Wet, 2015).

The eighth selected source of evidence is titled 'Teachers' experiences of power relations as psychological violence' by Human-van der Westhuizen published in 2012 (Human-van der Westhuizen, 2012). It employed a qualitative research method. The research questions for this study were: 1. What is the nature of power relations? 2. What is the association between power relations as psychological violence? 3. What is the experience of power relations as psychological violence among teachers? 4. What is the influence of power relations as psychological violence on teachers' health? The population was teachers at all levels of education, the main concept under investigation was power relations, and the context was the Western and Eastern Cape. There were 11 participants, the ages of whom were as follows: One participant was 20-30 years' old, four participants were 31-40 years' old, two participants were 41-50 years' old, and four participants were 51-60 years' old. Three participants were male, and 8 were female (Human-van der Westhuizen, 2012).

The ninth selected source of evidence is titled 'School Principals' Bullying Behaviour' by de Wet published in 2010 (de Wet, 2010). It employed a qualitative research method. The research question for this study was: What is the bullying behaviour of school principals? The population was primary and secondary school teachers, the main concept under investigation was workplace bullying, and the context was not specified. There were

10 participants, the average ages of whom were 48 years' old. Three participants were male, and 7 were female (de Wet, 2010).

The tenth selected source of evidence is titled 'Teachers' experiences of workplace bullying and its effects on health: developing a multi-level intervention programme' by De Vos published in 2013 (De Vos, 2013). It employed a qualitative research method. The research questions for this study were: 1. What is the nature of workplace bullying? 2. How does workplace bullying affect health? 3. What are teachers' experiences of workplace bullying and how does it affect health? 4. What kind of multi-level intervention programme can be developed? The population was primary school teachers, the main concept under investigation was workplace bullying, and the context was all over the country, with slightly more respondents from Gauteng and North West Province. There were 27 participants, who were mostly middle-aged. Three participants were male, and 24 were female (De Vos, 2013).

The eleventh selected source of evidence is titled 'Female teachers' experiences of senior male colleagues' exercising of power in schools' by Botes published in 2014 (Botes, 2014). It employed a qualitative research method. The research questions for this study were: 1. How do female teachers conceptualise power? 2. How do female teachers view power hierarchy in schools? 3. Why do female teachers experience senior male colleagues' exercising of power in schools the way they do? 4. What is the effect of senior male colleagues' power on female teachers' well-being? The population was primary or secondary teachers, the main concept under investigation was power relations, and the context was the North West Province. There were 16 participants, the ages of whom were as follows: one participant was 21 years' old, one participant was 22 years' old, one participant was 23 years' old, two participants were 24 years' old, one participant was 25 years' old, one participant was 30 years' old, two participants were 33 years' old, one participant was

36 years' old, two participants were 41 years' old, two participants were 43 years' old, one participant was 45 years' old and one participant was 46 years' old. All 16 participants were female (Botes, 2014).

The twelfth selected source of evidence is titled 'The role of the principal in maintaining a harmonious working environment: an investigation into "legal" staff bullying by the School management team in Ekurhuleni north district high schools' by Binduko published in 2013 (Binduko, 2013). It employed a mixed research method. The research questions for this study were: 1. What is the level of bullying of staff by the SMT in high schools? 2. What is the extent of staff bullying by the SMT? 3. What is the impact of staff bullying by the SMT? 4. What role should the principal play in creating a harmonious working environment with particular reference to staff bullying by the SMT? 5. What can be done to eliminate staff bullying by the SMT in South African schools? The population was secondary schools, the main concept under investigation was workplace bullying, and the context was Gauteng. There were 52 questionnaires and 10 interviews, the ages of whom were as follows:

Teachers that completed questionnaires: between 21 and >50.

Teachers that were interviewed teachers: 6 participants=31-40 years' old; 2 participants=41-50 years' old; 2 participants= >50 years' old

The genders of the participants were as follows:

Teachers that completed the questionnaire: Female (n=32) Male (n=20)

Teachers that were interviewed Teachers: Female (n=5) Male (n=5) (Binduko, 2013).

Additional information that may have been of interest could be identified in the sampling strategies and the research methods of each selected source of evidence. All the selected studies used purposive sampling strategies because of the sensitive nature of the research, and participants were chosen either because they volunteered or because they were

recruited by their acquaintances who were also teachers/educators that were involved in the studies. This can affect the generalisability of the results of each selected study, and this will be discussed later in the limitations of this scoping review (Scholtz, 2021).

Furthermore, the majority (10) of selected studies were conducted using the qualitative research method, with one using a quantitative research method and one using a mixed methods approach. Because the research questions of the current review focus on the psychological effects and experiences of teachers under TL, qualitative research methods are beneficial, as they provide further insights and allow researchers to investigate phenomena in more detail (Almalki, 2016).

4.3. Critical appraisal within sources of evidence

According to the adjusted PRISMA-ScR checklist developed by the 2020 JBI Guide developers, this step should only be reported if it is relevant to the research questions and objectives of this scoping review (Peters et al., 2020a). Because this scoping review did not investigate the methodological approaches of selected sources of evidence, this step will not be conducted.

Table 2

A summation of the extracted data from the selected sources of evidence

	Article 1	Article 2	Article 3	Article 4	Article 5	Article 6	Article 7	Article 8	Article 9	Article 10	Article 11	Article 12
Title	The professional lives of teacher victims of workplace bullying: A narrative analysis	The Role of the EAP in Addressing Workplace Bullying in a School System	Educators' understanding of workplace bullying	The nature of workplace bullying experienced by teachers and the biopsychosocial health effects	Teachers' experiences of conflict with school principals: The impact on teachers, teaching and learning	Teachers' Experiences Of Workplace Bullying In Independent Schools	A quantitative exploration of the effects of workplace bullying on South African educators	Teachers' experiences of power relations as psychological violence	School Principals' Bullying Behaviour	Teachers' experiences of workplace bullying and its effects on health: developing a multi-level intervention programme	Female teachers' experiences of senior male colleagues' exercising of power in schools	The role of the principal in maintaining a harmonious working environment: an investigation into "legal" staff bullying by the School management team in Ekurhuleni north district high schools
Author	de Wet, C.	Lesch, T.	de Wet, C.	De Vos, J. & Kirsten, G.J.C.	Kaloo, M.A.	Mollema, E.H.	Jacobs, L. & de Wet, C.	Human-van der Westhuizen, A.	de Wet, N.C. & de Wet, C.	De Vos, J.	Botes, W.	Binduko, S.
Research questions	How do teachers who have been bullied over an extended period of time make	What is the role of the EAP offered at a primary school to assist teachers in managing	What is the experience of educators as victims and/or onlookers of bullying?	1. What is the nature of workplace bullying experienced by teachers in South African schools?	1. What are the experiences of teachers who have had conflicts with	1. How do teachers experience workplace bullying in independent schools in Gauteng?	1. What are the effects of WPB on victims of bullying? 2. How are different groups of victims	1. What is the nature of power relations? 2. What is the association between power relations as	What is the bullying behaviour of school principals?	1. What is the nature of workplace bullying? 2. How does workplace	1. How doo female teachers conceptualise power? 2. How do female teachers view	1. What is the level of bullying of staff by the SMT in high schools? 2. What is the extent of staff

	meaning of their professional lives and what are the implications thereof for their identities, relationships and future?	workplace bullying?		2. What are the biopsychosocial health effects that may stem from such experiences?	principals and how does it affect them? 2. How does conflict between teachers and principals affect teaching and learning?	2. How do teachers define and describe bullying? 3. How do teachers deal with being bullied? 4. How does bullying affect thosewho are bullied? 5. What, if any, support is provided by schools for teachers who are bullied?	affected by WPB?	psychological violence? 3. What is the experience of power relations as psychological violence among teachers? 4. What is the influence of power relations as psychological violence on teachers' health?	bullying affect health? 3. What are teachers' experiences of workplace bullying and how does it affect health? 4. What kind of multi-level intervention programme can be developed?	power hierarchy in schools? 3. Why do female teachers experience senior male colleagues‟ exercising of power in schools the way they do? 4. What is the effect of senior male colleagues' ‟ power on female teachers' ‟ well-being?	bullying by the SMT? 3. What is the impact of staff bullying by the SMT? 4. What role should the principal play in creating a harmonious working environment with particular reference to staff bullying by the SMT? 5. What can be done to eliminate staff bullying by the SMT in South African schools?
Population	Secondary school teachers	Primary school teachers	Teachers at all levels of education	Primary school teachers	Secondary school teachers	Not specified	Teachers at all levels of education	Teachers at all levels of education	Primary and secondary school teachers	Primary school teachers	Female primary or secondary school teachers	Secondary schools

Concept	Workplace bullying	Workplace bullying	Workplace bullying	Workplace bullying	Conflict with school principals	Workplace bullying	Workplace bullying	Power relations	Workplace bullying	Workplace bullying	Power relations	Workplace bullying
Context	Province not specified	Western Cape	Free State	All over the country, predominantly Gauteng and North West Province	KwaZulu-Natal	Gauteng	Free State	Western and Eastern Cape	Province not specified	All over the country, slightly more respondents from Gauteng and North West Province	North West Province	Gauteng
Number of participants	2	13	59	27	6	6	850	11	10	27	16	Questionnaire: 52 Interview: 10
Age	Not specified	1 participant=24 years' old 1 participant=36 years' old 1 participant=38 years' old 1 participant=45 years' old	11 participants ≤ 30 years' old 22 participants=30-40 years' old 23 participants=41-50 years' old 3 participants > 50 years' old	Not specified	Not specified	Not specified	187 participants ≤30 years' old 360 participants=31-50 years' old 303 participants= >51 years' old	1 participant=20-30 years' old 4 participants=31-40 years' old 2 participants=41-50 years' old	Average age= 48 years	Mostly middle-aged	1 participant=21 years' old 1 participant=22 years' old 1 participant=23 years' old 2 participants=24 years' old	Questionnaires: between 21 and >50 Interviewed teachers: 6 participants=31-40 years' old 2 participants=41-50 years' old

											4 participants=47 years' old 1 participant=48 years' old 1 participant=52 years' old 1 participant=53 years old' 2 participants=54 years' old	
											4 participants=51- 60 years' old	
											1 participant=25 years' old 1 participant=30 years' old 2 participants=33 years' old 1 participant=36 years' old 2 participants=41 years' old 2 participants=43 years' old 1 participant=45 years' old 1 participant=46 years' old	2 participants= >50 years' old
Gender	Female (n=1) Male (n=1)	Female (n=10) Male (n=3)	Female (n=44) Male (n=15)	Gender of only 25 participants identified - Female (n=24) Male (n=1) Unknown (n=2)	Not specified	Female (n=5) Male (n=1)	Female (n=710) Male (n=130)	Female (n=8) Male (n=3)	Female (n=7) Male (n=3)	Female (n=24) Male (n=3)	Female (n=16)	Questionnaire: Female (n=32) Male (n=20) Interviewed Teachers: Female (n=5)

												Male (n=5)
Year	2011	2020	2014	2015	2014	2018	2015	2012	2010	2013	2014	2013

4.4. Synthesis of Results

4.4.1. Psychological effects identified in sources of evidence

All selected sources of evidence indicated that victims of TL experienced psychological as well as psychosomatic effects.

The common psychological effects reported in the selected sources of evidence are:

- Stress
- Feelings of Powerlessness
- Isolation
- Loss of self-confidence
- Humiliation
- Low morale
- Depression
- Hopelessness

Table 3

Frequency table illustrating the number of times the common psychological effects appeared in the 12 selected articles

Common Psychological effect	Frequency
Stress	10
Feelings of Powerlessness	9
Isolation	9
Loss of self-confidence	9
Humiliation	8
Low morale	8
Depression	7
Hopelessness	6

Less common psychological effects recorded in the findings of the selected sources of evidence are:

- Disappointment (de Wet, 2011)
- Frustration (de Wet, 2011; Lesch, 2020)
- Irritability (Lesch, 2020)
- Anxiety (De Vos, 2013; Lesch, 2020)
- Sadness (De Vos & Kirsten, 2015; Jacobs & de Wet, 2015; Lesch, 2020; Mollema, 2018)
- Fear (Botes, 2014; De Vos, 2013; Kaloo, 2014; Lesch, 2020; Mollema, 2018)
- Post-Traumatic-Stress-Disorder (De Vos, 2013; Kaloo, 2014; Lesch, 2020)
- Tearfulness (De Vos, 2013; De Vos & Kirsten, 2015)
- Low self-esteem (Binduko, 2013; De Vos & Kirsten, 2015; Kaloo, 2014)
- Worthlessness (Binduko, 2013; Botes, 2014; De Vos, 2013; De Vos & Kirsten, 2015)
- Anger (De Vos, 2013; Kaloo, 2014; Lesch, 2020)
- Burnout (De Vos, 2013; Mollema, 2018)
- Shame (Binduko, 2013; Botes, 2014; Jacobs & de Wet, 2015)
- Cognitive difficulties (Jacobs & de Wet, 2015)
- Personality changes (De Vos, 2013; Human-van der Westhuizen, 2012)
- Mood changes (Jacobs & de Wet, 2015)
- Suicidal ideation (De Vos, 2013)
- Panic attacks (De Vos, 2013)
- Lack of interest (Binduko, 2013; Botes, 2014; Human-van der Westhuizen, 2012)
- Feeling Unappreciated (de Wet, 2010; de Wet, 2011)
- Eating disorders (Jacobs & de Wet, 2015; Lesch, 2020; Mollema, 2018)

- Feelings of Abandonment (Jacobs & de Wet, 2015)
- Feelings of Betrayal (Jacobs & de Wet, 2015)
- Nightmares (Binduko, 2013; Jacobs & de Wet)

4.4.2. Experiences identified in sources of evidence

A common, and most frequently identified experience in the selected sources was that the abusive superiors were overbearing and over-controlling of the victims. The second most frequently identified experience is that the personal (social and familial relationships) lives of the victims was affected by the abuse they experienced. The third most common experience is that of public humiliation endured by the victims. Victims being excluded from conversations and/or events, as the abusers had favourites who were given preference in these situations was the fourth most common experience. Being threatened, being the subject of malicious rumours, being ignored or given "silent treatment" (de Wet, 2010), and being verbally abused (e.g. swearing and insults) was the fifth most common experience reported by participants in the selected sources. All of these experiences are corroborated by the research presented in the literature review.

Common experiences identified in each source of evidence are:

- The professional images of victims were tainted and victims were made to seem incompetent or not diligent - one particular way this was mentioned was is by toxic leaders withholding information, such as circulars regarding important dates and memorandums, so that victims were unaware and appeared incapable (De Vos & Kirsten, 2015; de Wet, 2010)
- Principals making unfair or impossible demands of victims (including overwhelming workload e.g. De Vos and Kirsten, (2015) and de Wet (2014))

- A lack of respect for victims' work-life balance and boundaries (de Wet, 2014)
- Victims were seen as obsessively preoccupied with their abuse (De Vost, 2013; Jacobs & de Wet, 2015; Human-van der Westhuizen, 2012)
- Victims experienced a desire to resign (Binduko, 2013; Botes, 2014)
- Victims were shouted at (de Wet, 2014; Human-van der Westhuizen, 2012; Mollema, 2018)
- Victims questioning their faith and religion (De Vost, 2013; De Vos & Kirsten, 2015)
- Many victims experienced job insecurity, as superiors threatened to dismiss these victims (Binduko, 2013; de Wet, 2014; Human-van der Westhuizen, 2012)
- Some victims experienced suicidal ideation because of the abuse (De Vos, 2013)
    - Victims would avoid work because of the abuse (e.g. Lesch)
    - Victims experiencing a lack of support in confrontations with problematic students, colleagues, parents etc. (de Wet, 2010)
    - Victims being denied time off for medical emergencies - this was given in two examples in de Wet (2014) firstly, when one victim's request to schedule a doctor's appointment during school hours was denied, and secondly, when another victim's sick leave was denied even though they needed to be admitted to hospital
    - Cyber-bullying and harassment by abusers (De Vos & Kirsten, 2015)

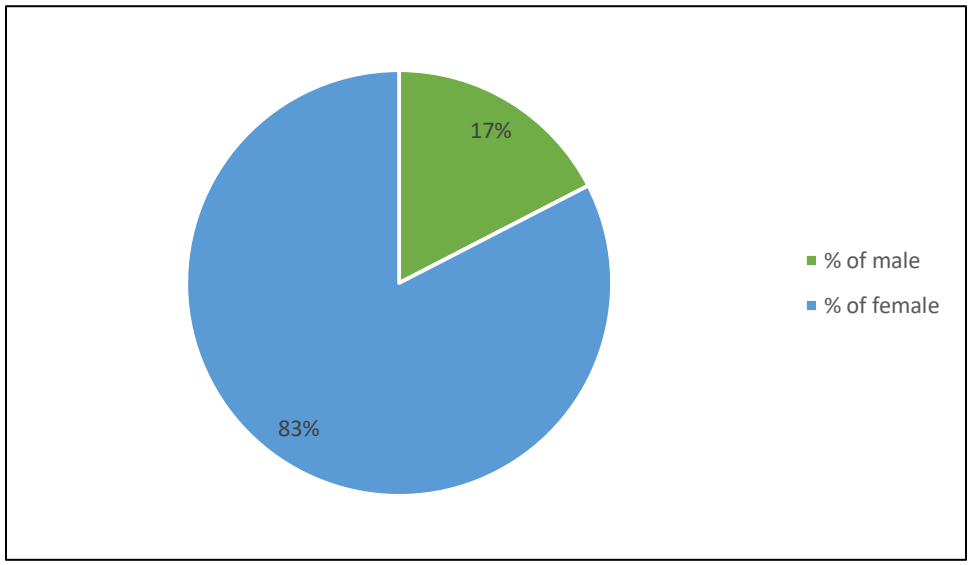
The total number of female teacher participants (for all 12 selected articles) is 829, and the total number of male teacher participants is 175. The percentage difference between the female and male teachers is illustrated in the Figure 1 below. Given the global gender imbalance of teachers, and the greater number of female teachers than male teachers (Lassibille & Navarro Gómez, 2020), this difference in female and male participants is not surprising. Regarding

gender, the results of only three studies indicated that male principals were the main perpetrators of abuse (De Vos & Kirsten, 2015; de Wet, 2014; Human-van der Westhuizen, 2012). Furthermore, only Jacobs and de Wet (2015) and Human-van der Westhuizen (2012) investigated the possibility that gender and age could increase or be linked to the likelihood that a teacher would experience abuse by superiors. They found that younger, female teachers had experienced this abuse more frequently. Additionally, Human-van der Westhuizen (2012) explores the possible link between race and culture and the experience of abuse by superiors in the school setting, and found that individuals of colour, and of Sesotho ethnicity, reported experiencing this abuse the most. Given the very small sample size of the studies and the small samples within them, the generalisability is low.

De Vos and Kirsten (2015) also mention gender and race, but do not explore the possible connection of these concepts to the experience of abuse by toxic leaders. However, De Vos (2013) investigates gender and race and the possible link between these and the experience of abuse by toxic superiors. Finally, Kaloo (2014) mentions that the sample for the study was made up of Indian and Black individuals, however, the study does not investigate a link between race and the experience of abuse by toxic leaders in schools.

Figure 1

Percentage difference in gender between total sample size (all 12 selected articles)



Chapter 5: Discussion and conclusion

This section will provide a summary of the evidence, the limitations of the current review, a conclusion regarding the findings and the implications thereof, and discuss the funding of this review as well as the funding for the selected sources of evidence.

5.1. Summary of evidence

Firstly, the main findings of this review regarding the psychological effects of TL on teachers that operate under toxic leaders are that feelings of powerlessness, isolation, humiliation, depression, stress, loss of self-confidence, and hopelessness were the most commonly reported psychological effects.

Secondly, the main findings regarding the most common experiences of teachers who were victims of toxic leadership are:

1. That abusive superiors were overbearing and over-controlling of the victims,
2. That the victims' personal (social and familial relationships) lives were negatively affected by the abuse they experienced, and
3. That victims experienced public humiliation.
4. Victims were excluded from conversations and/or events, because of favouritism shown by the abusers, and the individuals who were the favourites were given preference in these situations
5. Victims experienced being threatened, being the subject of malicious rumours, being ignored or given "silent treatment" (de Wet, 2010) and being verbally abused (e.g. being subjected to swearing and insults).

These findings corroborate the information presented in the literature review.

5.2. Limitations

5.2.1. Because of a lack of research conducted for the concept of TL within schools, the reviewers had to analyse studies that explored indicators of TL, and the easiest indicator to identify was WPB (specifically bullying of subordinates by leaders) however, this may decrease the confidence of the results of this study, as the construct of TL was not directly investigated.

5.2.2. The search was conducted manually which left room for common human error, as automated search software was not available to the primary reviewer. Therefore, it is possible that relevant articles were missed and not included within the analysis.

5.2.3. Because of the sheer number of pages of all retrieved possible sources of evidence, the primary researcher had to make use of the search option in Microsoft Edge to identify key words to ensure articles were relevant. Therefore, if information related to the topic of this scoping review did not align to the key words; then, human error may have excluded relevant sources. Furthermore, the reference lists of all selected sources of evidence were manually scanned by the primary reviewer, creating more room for human error.

5.2.4. The majority of articles did not report whether they received funding. Therefore, if there was a bias or conflict of interest, this could not be recorded or identified by the reviewers of this scoping review.

5.2.5. Inherent limitations of the interview process as a research instrument is that the interviewees may not be completely truthful in their responses; in order to please the researcher or to protect their role within their organisation, creating reporting bias (Catania, 1999).

5.2.6 It was noted that male school principals (gatekeepers), whose permission was required to conduct the research at their school, used their authoritative power by declining to grant permission for research to be undertaken at their respective schools (Botha, 2014). It is

possible that valuable insights could have been gathered from research in these schools, therefore, being denied access is a limitation.

5.2.7. When analysing the selected sources of evidence, it became apparent to the reviewers of the current study that teachers do not always recognise or are not always aware that they are being exposed to power abuse (e.g. Mollema, 2018). This is because certain behaviours of power abuse become somewhat of a norm (van der Westhuizen, 2012). Therefore, if TL existed in these schools, and teachers were not aware or did not recognise it, this information was not recorded. This could also decrease the confidence in the results of this study.

5.3. Conclusions

The research questions of this scoping review were: What is the experience of educators who work under toxic leaders in South African schools, and how does toxic leadership impact upon the psychological well-being of educators under principals/heads of departments who hold a toxic leadership style, in South African schools?

The aims of this study were to identify, analyse and assess the nature and size of existing research regarding TL in South African schools, and how it affected the psychological well-being of teachers who worked under toxic leaders. Furthermore, this study aimed to provide a broad yet detailed idea of the impact that TL has on teachers. The objective of this review was to be unbiased and reproducible (Grant & Booth, 2009) so that schools and management of schools could have evidence of the harmful effects of TL on teachers' well-being, and this could possibly be used to inform policymakers and workplace practices (however, based on the purposes of scoping reviews according to the 2020 JBI Guide, emphasis was not placed on informing policy and/or practice, so this review will not make recommendations). Lastly, the review aimed to identify gaps in the current literature which may provide implications for future studies.

In total, 12 selected sources of evidence were analysed in this review. Major limitations of this review include a lack of funding for the current study, the difficulty in finding sources of evidence solely for TL and with a sample strictly including teachers. Furthermore, the search and the scanning of references, was conducted manually which left room for common human error.

Only one article reported the source of funding, while the other 11 did not report funding, therefore, the reviewers of this report could not highlight possible bias of conflicts of interest from this. Additionally, reporting bias could have been an issue because of the inherent limitations of interviews regarding participant transparency. Another limitation was the gatekeeping experience by researchers of selected sources of evidence, because it inhibited these researchers from gaining access to possibly beneficial information. Finally, a lack of awareness or recognition of TL in schools by some teachers could also influence the confidence of the results.

The most common psychological effects reported in the selected sources of evidence are:

- Stress
- Feelings of Powerlessness
- Isolation
- Loss of self-confidence
- Humiliation
- Low morale
- Depression
- Hopelessness

5.4. Potential implications/gaps in research

A major gap in the research is that the construct of TL has not been directly investigated in schools. Indicators such as WPB had to be explored in order to tap into the construct of toxic leadership. Therefore, reviewers of this study recommend that future research explicitly attempt to explore TL within schools, and in this regard future research may have to widen the sample base.

The majority of analysed studies considered a relatively small number of participants, and smaller samples are known to create bias; as they lead to higher variability and can skew the data (Higgins et al., 2008). It would be beneficial for future studies to attempt to specifically investigate TL or its indicators using larger sample sizes. Furthermore, studies could have been considered to be more reliable had they included a larger number of participants across more schools; both government and private. This would be more representative and provide more context of the full issues across South Africa. Additionally, sampling strategies were not random, due to the sensitive nature of the research conducted. Therefore, researchers of the selected sources of evidence employed purposive sampling, which could decrease the generalisability of the findings (Scholtz, 2021). However, given the nature of this kind of research, randomly sampling participants may be a challenge.

Additionally, not all health issues can be directly attributed to TL as some health issues may have been caused by other stressful events which are separate from TL. Participants could have experienced psychological issues before experiencing TL. Therefore, the current reviewers recommend that future studies investigate to what extent the health issues participants experienced are related to TL or try to establish with participants if there were other reasons that

could have been the catalysts of mental health issues, so that findings regarding this concept are more accurate and reliable.

A few selected sources of evidence investigated the possible connection between victims of TL and their gender, age and race. However, some of the results were contradictory, as De Vos and Kirsten (2015), de Wet (2014) and Human-van der Westhuizen, (2012) hypothesised that individuals from historically marginalised social identity groups (Black people, women, younger individuals) experienced more instances of TL. However, results from some of these sources of evidence indicate that these social identities do not affect the frequency of experience of TL. Furthermore, some studies did not accurately report age, race and gender, and chose instead to solely focus on educators based on their profession and not any other identities (De Vos & Kirsten, 2015; de Wet, 2011; Kaloo, 2014; Mollema, 2018).

Chapter 6: Funding

The following chapter documents the funding for each individual source of evidence, as well as the funding for the current scoping review. If the roles of funders in each selected source of evidence is specified, this will be documented in this section as well.

6.1. Funding for each individual source of evidence

Each article was analysed manually by the primary reviewer, and it was discovered that no article reported funding. Kaloo (2014) stated that the entire study was funded by the researcher who was a student, therefore, there was no research grant provided. The researchers of the remaining 11 articles did not report whether funding was accepted.

6.2. Funding received for the current scoping review

No funding was received for the current scoping review, and any fiscal issues related to this study were resolved by the primary reviewer. This, however, can be seen as a limitation because, as a student, the primary reviewer's economic input in the study was very limited.

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Appendices

Appendix A:

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
Registration number: REC-101114-044

SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT ETHICS COMMITTEE

Ethics clearance / waiver number:

DATE: 15 July 2021

Re: Erin Caitlin Van Wyk (1616193)

To whom it may concern,

Erin Caitlin Van Wyk (1616193) is currently registered as a Masters student at the School of Human and Community Development, University of the Witwatersrand, Johannesburg. This letter is to confirm that, at the time of writing, Erin Caitlin Van Wyk does not need ethical clearance for her study entitled "The Psychological Impact of Toxic Leadership on Teachers within South African Schools – A Scoping Review". This decision has been reached based upon a description of the project supplied by Erin Caitlin Van Wyk to the School of Human and Community Development Ethics Committee, constituted as a subcommittee of the University Human Research Ethics Committee (Non-Medical), which has been evaluated by the subcommittee chair. This decision has then been ratified by the University Human Research Ethics Committee (Non-Medical). If, however, Erin Caitlin Van Wyk changes the methods of data collection and analysis for this project, this decision may no longer be valid. If such changes take place, this should be communicated to the School of Human and Community Development Ethics Committee.

Please feel free to contact me should you require any further information. Thank you.

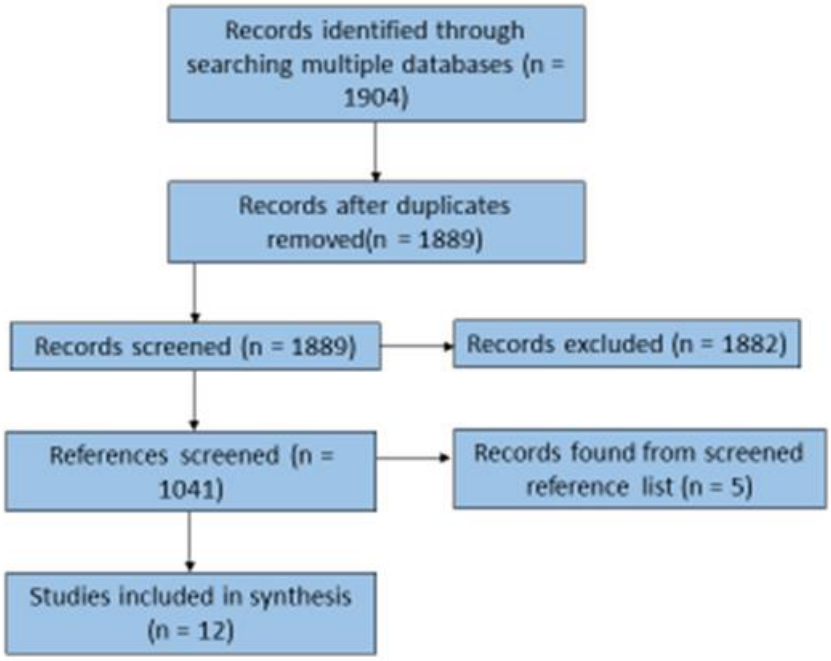
Yours sincerely,

Professor Zaytoon Amod

Shaun Schoeman (Senior Administrative Officer)
Solomon Mahlangu House, 10th Floor, Room 10004, Jorissen Street, Braamfontein, Johannesburg Private Bag 3, Wits 2050
T + 27(0)11 717 1408 **| E** Shaun.Schoeman@wits.ac.za **|** hrecnon-medical@wits.ac.za
www.wits.ac.za/research/about-our-research/ethics-and-research-integrity/

Appendix B:

Flow Chart depicting the selection of sources of evidence



Appendix C:

The appendix below is the scoping review guidelines that were used for this review

PRISMA-ScR

ITEM 1: TITLE

Identify the report as a scoping review.

Title	***1***	***Title***
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

Include the term “scoping review” in the title of the review
Ensure that the title reflects the key components that inform the eligibility criteria of the scoping review (i.e., population, concept, context)

Example:

“*Screening a cognitive impairment in the dialysis population: ascoping review”*

San A, Hiremagalur B, Muircroft W, Grealish L. Screening of cognitive impairment in the dialysispopulation: a scoping review. Dement Geriatr Cogn Disord. 2017;44:182-95. [PMID: 28869959] doi:10.1159/000479679

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 2: STRUCTURED SUMMARY

Provide a structured summary that includes (as applicable) background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that related to the review questions and objectives.

Title	1	Title
Abstract	***2***	***Structured summary***
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

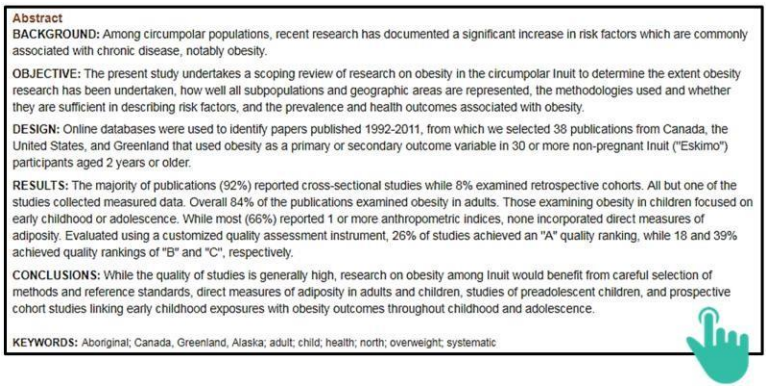
Tips for reporting this item:

Provide concise descriptions of the aims, methods, findings, and conclusions of the scoping review so thatthey can be easily identified by knowledge users

Include additional details, such as funding and registration numbers when available

Example:

Click the image below to expand the figure.



Abstract

BACKGROUND: Among circumpolar populations, recent research has documented a significant increase in risk factors which are commonly associated with chronic disease, notably obesity.

OBJECTIVE: The present study undertakes a scoping review of research on obesity in the circumpolar Inuit to determine the extent obesity research has been undertaken, how well all subpopulations and geographic areas are represented, the methodologies used and whether they are sufficient in describing risk factors, and the prevalence and health outcomes associated with obesity.

DESIGN: Online databases were used to identify papers published 1992-2011, from which we selected 38 publications from Canada, the United States, and Greenland that used obesity as a primary or secondary outcome variable in 30 or more non-pregnant Inuit ("Eskimo") participants aged 2 years or older.

RESULTS: The majority of publications (92%) reported cross-sectional studies while 8% examined retrospective cohorts. All but one of the studies collected measured data. Overall 84% of the publications examined obesity in adults. Those examining obesity in children focused on early childhood or adolescence. While most (66%) reported 1 or more anthropometric indices, none incorporated direct measures of adiposity. Evaluated using a customized quality assessment instrument, 26% of studies achieved an "A" quality ranking, while 18 and 39% achieved quality rankings of "B" and "C", respectively.

CONCLUSIONS: While the quality of studies is generally high, research on obesity among Inuit would benefit from careful selection of methods and reference standards, direct measures of adiposity in adults and children, studies of preadolescent children, and prospective cohort studies linking early childhood exposures with obesity outcomes throughout childhood and adolescence.

KEYWORDS: Aboriginal; Canada, Greenland, Alaska; adult; child; health; north; overweight; systematic

Galloway T, Blackett H, Chatwood S, Jeppesen C, Kandola K, Linton J, et al. Obesity studies in the circumpolar Inuit: a scoping review. Int J Circumpolar Health. 2012;71:18698. [PMID:22765938] doi:10.3402/ijch.v71i0.18698

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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PRISMA-ScR

ITEM 3: RATIONALE

Describe the rationale for the review in the context of what is already known. Explain why the review questions or objectives lend themselves to a scoping review approach.

Title	1	Title
Abstract	2	Structured summary
Introduction	***3***	***Rationale***
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Be comprehensive and describe the main concepts of the research topic, important definitions, and existing knowledge in the field
- Provide a clear rationale for why the scoping review method is appropriate to address the research question / objectives

Example:

"Parents, in particular, greatly influence participation at school, at home and in the community. They undertake many actions to improve their children's participation in daily life. Understanding the actions of parents and also their challenges and needs will contribute to how society can support these parents and thereby enable the participation of children with physical disabilities. Pediatric rehabilitation, aiming for optimal participation, could benefit from this understanding to improve Family-centered services (FCS)…
However, it is unclear what kind of information is available in literature about what parents live through, do, and what kind of problems and needs they have in supporting their child's participation? For these reasons, a scoping review was conducted in order to systematically map the research done in this area, as well as to identify any existing gaps in knowledge"

Piškur B, Beurskens AJ, Jongmans MJ, Ketelaar M, Norton M, Frings CA, et al. Parents' actions, challenges, and needs while enabling participation of children with a physical disability: a scoping review. BMC Pediatr. 2012;12:177. [PMID: 23137074] doi:10.1186/1471-2431-12-177

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 4: OBJECTIVES

Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (for example, population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions or objectives.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	***Objectives***
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Include clear and explicit statement(s) about the objectives and research questions being addressed
- Identify the key elements of the research question that were used to conceptualize the review focus using frameworks such as (but not limited to) PICO: Population, Intervention, Comparator, Outcome; SPICE: Setting, Population/Perspective, Intervention, Comparison, Evaluation; or PCC: Population, Concept, Context.

Example:

"…a scoping review was conducted in order to systematically map the research done in this area, as well as to identify any existing gaps in knowledge.…The following research question was formulated: What is known from the literature about parents' action, challenges, and needs while enabling participation oftheir children with a physical disability?"

Piškur B, Beurskens AJ, Jongmans MJ, Ketelaar M, Norton M, Frings CA, et al. Parents' actions, challenges, and needs while enabling participation of children with a physical disability: a scoping review. BMC Pediatr. 2012;12:177. [PMID: 23137074] doi:10.1186/1471-2431-12-177

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 5: PROTOCOL AND REGISTRATION

Indicate whether a review protocol exists; state if and where it can be accessed (for example, a Web address); and if available, provide registration information, including the registration number.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	***5***	***Protocol and registration***
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Must be developed a priori, and include information on how the protocol was developed
- Provide explicit details on how to access the protocol, including information on how to obtain a protocol that is not publicly available
- Cite the original review when performing an update of an existing review

Example:

"Our protocol was drafted using the Preferred Reporting Itemsfor Systematic Reviews and Meta-analysis Protocols (PRISMA- P…), which was revised by the research team and members of Health Canada, and was disseminated through our programme'sTwitter account (@KT-Canada) and newsletter to solicit additional feedback. The final protocol was registeredprospectively with the Open Science Framework on 6 September 2016 (https://osf.io/kv9hu/)."

Tricco AC, Zarin W, Lillie E, Pham B, Straus SE. Utility of social media and crowd-sourced data for pharmacovigilance: a scoping review protocol. BMJ Open. 2017; 7:e013474. [PMID: 28104709] doi: 10.1136/bmjopen-2016-013474

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 6: ELIGIBILITY CRITERIA

Specify characteristics of the sources of evidence used as eligibility criteria (for example, years considered, language, and publication status), and provide a rationale.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	***Eligibility criteria***
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Describe the eligibility criteria with a rationale for why these criteria were selected
- Identify any specific restrictions such as date, language, etc. that were included as part of the eligibility criteria and provide a rationale for each

Example:

"…to be included in the review, papers needed to measure or focus on specific dimensions of treatment burden, developed in the conceptual framework (e.g. financial, medication, administrative, lifestyle, healthcare and time/travel). Peer-reviewed journal papers were included if they were: published between the period of 2000–2016, written in English, involved human participants and described a measure for burden of treatment, e.g. including single measurements, measuring and/or incorporating one or two dimensions of burden of treatment. Quantitative, qualitative and mixed-method studieswere included in order to consider different aspects of measuring treatment burden. Papers were excluded if they did not fit into the conceptual framework of the study, focused on a communicable chronic condition, for example human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) or substance abuse. Papers talking about carer burden, in addition to patient burden of treatment, were also included."

Sav A, Salehi A, Mair FS, McMillan SS. Measuring the burden of treatment for chronic disease: implications of a scoping review of the literature. BMC Med Res Methodol. 2017;17:140. [PMID:28899342] doi:10.1186/s12874-017-0411-8

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 7: INFORMATION SOURCES

Describe all information sources in the search (for example, databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	***Information sources***
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Ensure a comprehensive literature search is done, which may include both published and difficult to locate or unpublished (sometimes called “gray”) literature
- Report all information sources (published and gray) included in the search
- Report the date the literature search was last executed to show how current the information within the review is
- Provide a detailed description of whether the search was supplemented with scanning of reference lists of relevant reviews, hand-searching key journals, etc.

Example:

“To identify potentially relevant documents, the following bibliographic databases were searched from 2004 to June 2015: MEDLINE, EMBASE, LexisNexis Academic, the Legal Scholarship Network, Justis, LegalTrac, QuickLaw, and HeinOnline. The search strategies were drafted by an experienced librarian [name] and further refined through team discussion. The final search strategy for MEDLINE can be found in Additional file 3. The final search results were exported into EndNote, and duplicates were removed by a library technician. The electronic database search was supplemented by searching the Canadian Medical Protective Association website (https://www.cmpa-acpm.ca/en) and scanning relevant reviews.”

Cardoso R, Zarin W, Nincic V, Barber SL, Gulmezoglu AM, Wilson C, et al. Evaluative reports on medical malpractice policies in obstetrics: a rapid scoping review. Syst Rev. 2017;6:181. [PMID: 28874176] doi:10.1186/s13643-017-0569-5

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 8: SEARCH

Present the full electronic search strategy for at least one database, including any limits used, such that it could be repeated.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	***Search***
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
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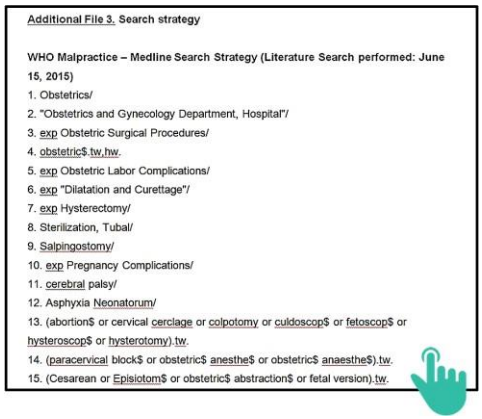
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Report the search in a manner that allows for easy replication by others
- Provide the entire search strategy for at least one database either in the text, a table or an appendix
- Report details on who developed and executed the search strategy (e.g., information specialist) and whether the search strategy was peer-reviewed by another librarian using the Peer Review of Electronic Search Strategies (PRESS) checklist
- Provide a detailed account of how sources of gray literature were searched
- Document and report all search limitations and filters applied (if any) along with rationales for each

Example:

Click the image below to expand the figure.



Additional File 3. Search strategy

WHO Malpractice – Medline Search Strategy (Literature Search performed: June 15, 2015)

1. Obstetrics/
2. "Obstetrics and Gynecology Department, Hospital"/
3. exp Obstetric Surgical Procedures/
4. obstetric$.tw,hw.
5. exp Obstetric Labor Complications/
6. exp "Dilatation and Curettage"/
7. exp Hysterectomy/
8. Sterilization, Tubal/
9. Salpingostomy/
10. exp Pregnancy Complications/
11. cerebral palsy/
12. Asphyxia Neonatorum/
13. (abortion$ or cervical cerclage or colpotomy or culdoscop$ or fetoscop$ or hysteroscop$ or hysterotomy).tw.
14. (paracervical block$ or obstetric$ anesthe$ or obstetric$ anaesthe$).tw.
15. (Cesarean or Episiotom$ or obstetric$ abstraction$ or fetal version).tw.

Cardoso R, Zarin W, Nincic V, Barber SL, Gulmezoglu AM, Wilson C, et al. Evaluative reports on medical malpractice policies in obstetrics: a rapid scoping review. Syst Rev. 2017;6:181. [PMID: 28874176] doi:10.1186/s13643-017-0569-5

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 9: SELECTION OF SOURCES OF EVIDENCE

State the process for selecting sources of evidence (that is, screening and eligibility) included in the scoping review.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	***Selection of sources of evidence***
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
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	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Provide a narrative description for the selection process of the included sources of evidence
- Include information about the process for developing the form used to standardize the selection evidence source (questions included in the form, testing the form, software used, etc.)
- Describe if calibration exercise was performed including the number of persons who tested the form, number of citations and full-text articles tested, the process for resolving inconsistences, and key changes that were made and why
- Describe the full screening process (number of reviewers, duplicate screening, verification) and how inconsistencies or disagreements were resolved (ex. third party)

Example:

"To increase consistency among reviewers, all reviewers screened the same 50 publications, discussed the results and amended the screening and data extraction manual before beginning screening for this review. Nine reviewers working in pairs sequentially evaluated the titles, abstracts and then full text of all publications identified by our searches for potentially relevant publications. . . . We resolved disagreements on study selection and data extraction by consensus and discussion with other reviewers if needed."

Duffett M, Choong K, Hartling L, Menon K, Thabane L, Cook DJ. Randomized controlled trials in pediatric critical care: a scoping review. Crit Care. 2013;17:R256. [PMID: 24168782] doi:10.1186/cc13083

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 10: DATA CHARTING PROCESS

Describe the methods of charting data from the included sources of evidence (for example, calibrated forms or forms that have been tested by the team beforetheir use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	***Data charting process***
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Use a clear and comprehensive data charting form to extract relevant information from included sources of evidence
- Describe how items were selected for charting, the software used and how calibration was carried out among team members
- Provide details on the full charting process, including how many reviewers charted, whether this was done independently, how inconsistencies in charting were resolved and how the data were verified
- Specify revisions and rationales for changes that were made to the charting form if this process was iterative
- Provide information on how to obtain and confirm data from investigators

Example:

"A data-charting form was jointly developed by two reviewers to determine which variables to extract. The two reviewers independently charted the data, discussed the results and continuously updated the data-charting form in an iterative process."

Lenzen SA, Daniëls R, van Bokhoven MA, van der Weijden T, Beurskens A. Disentangling self-management goal setting and action planning: a scoping review. PLoS One. 2017; 12:e0188822. [PMID: 29176800] doi: 10.1371/journal.pone.0188822. eCollection 2017

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 11: DATA ITEMS

List and define all variables for which data were sought and any assumptions and simplifications made.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	***Data items***
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Note that data items will vary for each review and can include a combination of qualitative or quantitative data depending on the review focus
- Describe any items that involve interpretation
- Include final versions of the charting form either in an appendix or supplementary file with clear definitions of each item

Example:

"We abstracted data on article characteristics (e.g., country of origin, funder), engagement characteristics and contextualfactors (e.g., type of knowledge user, country income level, type of engagement activity, frequency and intensity of engagement, use of a framework to inform the intervention), barriers andfacilitators to engagement, and results of any formal assessment of engagement (e.g., attitudes, beliefs, knowledge, benefits, unintended consequences)."

Tricco AC, Zarin W, Rios P, Nincic V, Khan PA, Ghassemi M, et al. Engaging policy-makers, heath system managers, and policy analysts in the knowledge synthesis process: a scoping review. Implement Sci. 2018;13:31. [PMID: 29433543] doi:10.1186/s13012-018-0717-x

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 12: CRITICAL APPRAISAL OF INDIVIDUAL SOURCES OF EVIDENCE

If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	***Critical appraisal of individual sources of evidence***
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Perform this step if it is relevant to the scoping review objectives
- Provide an explanation or rationale for how the appraisal aligns with review objectives
- Describe the methodological approach employed, including tools used, process followed, number of reviewers, and reviewer calibration process
- Describe how the findings from this step were used

Example:

"…an in-depth assessment of the conduct of the knowledge synthesis approaches underlying the NMA [network meta-analysis] is lacking. As such, we aimed to explore the characteristics and methodological quality of knowledge synthesis approaches of NMAs. We also aimed to assess the statistical methods applied using the Analysis subdomain of the ISPOR checklist.… The quality of the knowledge synthesis methods was appraised using the AMSTAR tool. The AMSTAR tool was created and validated to assess the methodological quality of systematic reviews of RCTs. The tool measures overallquality, where a score of 8 or higher is considered high quality, 4to 7 is moderate quality, and 0 to 3 is low quality. Information for quality assessment was incorporated into the data extraction form, which was pilot-tested on a random sample of seven included articles that ranged from low to high quality."

Zarin W, Veroniki AA, Nincic V, Vafaei A, Reynen E, Motiwala SS. et al. Characteristics and knowledge synthesis approach for 456 network meta-analyses: a scoping review. BMC Med. 2017; 15:3 [PMID: 28052774] doi: 10.1186/s12916-016-0764-6

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 13: SYNTHESIS OF RESULTS

Describe the methods of handling and summarizing the data that were charted.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	***Synthesis of results***
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Describe the plan for synthesizing the range of evidence included to answer research questions and objectives
- Detail how evidence will be presented which may be in a narrative format, table, or visual representation, including a map or diagram

Example:

"We grouped the studies by the types of behavior they analyzed, and summarized the type of settings, populations and study designs for each group, along with the measures used and broad findings. Where we identified a systematic review, wecounted the number of studies included in the review that potentially met our inclusion criteria and noted how many studieshad been missed by our search."

Hutchinson J, Prady SL, Smith MA, White PC, Graham HM. A scoping review of observational studies examining relationships between environmental behaviors and health behaviors. Int J Environ Res Public Health. 2015; 12:4833-58 [PMID: 25950651] doi: 10.3390/ijerph120504833

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 14: SELECTION OF SOURCES OF EVIDENCE

Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.

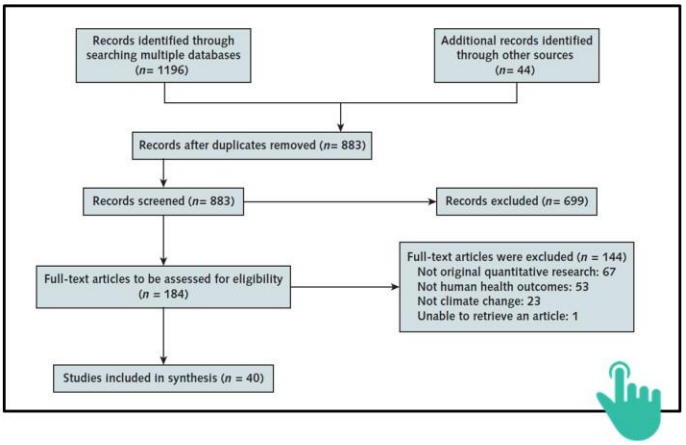
Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	***14***	***Selection of sources of evidence***
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for developing this item:

- Report the results of the literature search, numbers of citations screened, duplicates removed and full-text documents assessed, ideally with a flow diagram
- Use the original PRISMA flow diagram template as a guide
- Always report the reasons for exclusion at each level of screening (at minimum at the full-text level)

Example:

Click the image below to expand the figure.



Hosking J, Campbell-Lendrum D. How well does climate change and human health research match the demands of policymakers? A scoping review. Environ Health Perspect. 2012; 120:1076-82. [PMID:22504669] doi:10.1289/ehp.1104093

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 15: CHARACTERISTICS OF SOURCES OF EVIDENCE

For each source of evidence, present characteristics for which data were charted and provide the citations.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	***Characteristics of sources evidence***
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Describe the characteristics of each source of evidence along with their references
- Provide an overall summary in the text, with more details for individual sources of evidence in tables and appendices, as needed

Example:

"The modules [of the e-recovery interventions] are described in Table 2, together with a description of aim, target group and setting for each intervention. . . . The studies' place of origin, aims, design, methods, measures and outcomes, and main findings related to each intervention are presented in Table 3 Study characteristics. The number of studies available per interventions varied from one to six."

Strand M, Gammon D, Ruland CM. Transitions from biomedical to recovery-oriented practices in mental health: a scoping review to explore the role of Internet-based interventions. BMC Health Serv Res. 2017;17:257. [PMID: 28388907] doi:10.1186/s12913-017-2176-5

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 16: CRITICAL APPRAISAL WITHIN SOURCES OF EVIDENCE

If done, present data on critical appraisal of included sources of evidence.

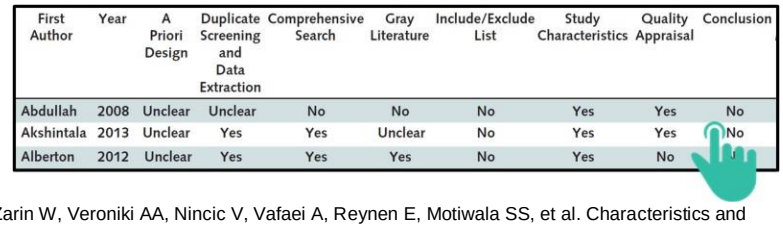
Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	***Critical appraisal within sources of evidence***
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Perform this step if relevant to the scoping review objectives
- Report data for each included source of evidence in a manner that corresponds with the approach described in Item 12
- Report results only if an appraisal was conducted

Example:

Click the image below to expand the figure.



First Author	Year	A Priori Design	Duplicate Screening and Data Extraction	Comprehensive Search	Gray Literature	Include/Exclude List	Study Characteristics	Quality Appraisal	Conclusion
Abdullah	2008	Unclear	Unclear	No	No	No	Yes	Yes	No
Akshintala	2013	Unclear	Yes	Yes	Unclear	No	Yes	Yes	No
Alberton	2012	Unclear	Yes	Yes	Yes	No	Yes	No	

Zarin W, Veroniki AA, Nincic V, Vafaei A, Reynen E, Motiwala SS, et al. Characteristics and knowledge synthesis approach for 456 network meta-analyses: a scoping review. BMC Med. 2017;15:3. [PMID:28052774] doi:10.1186/s12916-016-0764-6

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 17: RESULTS OF INDIVIDUAL SOURCES OF EVIDENCE

For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	***Results of individual sources of evidence***
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	22	Funding

Tips for reporting this item:

- Report all relevant outcomes data for each source of evidence
- Report this information in an appendix or supplementary file if there are a large number of evidence sources to be included in the manuscript

Example:

Click the image below to expand the figure.

Author	Article Type	Population	Patient-Centered Care Approach Identified
Ballweg [7]	Review article	Neonatal Intensive Care Unit	Developmentally Supportive, Family-Centered Care Model
Berger [8]	Review article	Psychiatry	The Tidal Model
Bickler [9]	Review article	Surgery	Patient-Focused Care Model
Boltz [10]	Review article	Geriatrics	Nurses Improving Care for Health System Elders
Booth & MacBride [11]	Review article	Generic	Patient-Centered Clinical Method
Briggs [12]	Review article	Palliative Care/	National Consensus Project for Quality Palliative Care
		Physical Therapy/	Hypothesis Oriented Algorithm for Clinicians
		End of Life Care	Framework for Rehabilitation of Neurodegenerative Diseases Framework for Assessment in Oncology Rehabilitation Models of Practice in Palliative Care
Browne et al. [13]	Review article	Nursing	Decentralization
Cox [14]	Review article	Psychiatry	Biopsychosocial Model

Constand MK, MacDermid JC, Dal Bello-Haas V, Law M. Scoping review of patient-centered care approaches in healthcare. BMC Health Serv Res. 2014; 14:271 [PMID: 24947822] doi: 10.1186/1472-6963-14-271

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 18: SYNTHESIS OF RESULTS

Summarize or present the charting results as they relate to the review questions and objectives.

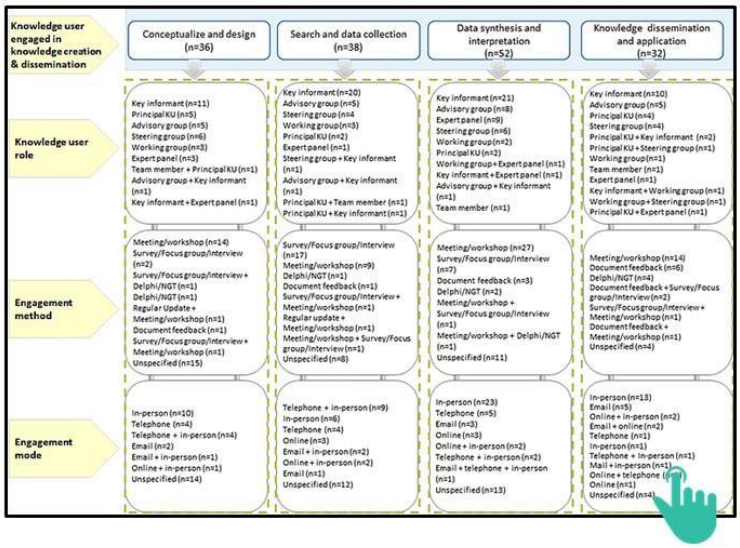
Title	1	Title	✓
Abstract	2	Structured summary	✓
Introduction	3	Rationale	✓
	4	Objectives	
Methods	5	Protocol and registration	
	6	Eligibility criteria	
	7	Information sources	
	8	Search	
	9	Selection of sources of evidence	✓
	10	Data charting process	
	11	Data items	
	12	Critical appraisal of individual sources of evidence	
	13	Synthesis of results	
Results	14	Selection of sources of evidence	
	15	Characteristics of sources evidence	
	16	Critical appraisal within sources of evidence	
	17	Results of individual sources of evidence	
	18	***Synthesis of results***	◀
Discussion	19	Summary of evidence	
	20	Limitations	
	21	Conclusions	
Funding	22	Funding	

Tips for reporting this item:

- Present data in a synthesis as a "map," framework, or describe it narratively so as to best convey the findings uncovered in the scoping review.

Example:

Click the image below to expand the figure.



Tricco AC, Zarin W, Rios P, Nincic V, Khan PA, Ghassemi M. et al. Engaging policy-makers, health system managers, and policy analysts in the knowledge synthesis process: a scoping review. Implement Sci. 2018;13:31

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 19: SUMMARY OF EVIDENCE

Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.

Title	1	Title	✓
Abstract	2	Structured summary	✓
Introduction	3	Rationale	✓
	4	Objectives	
Methods	5	Protocol and registration	
	6	Eligibility criteria	
	7	Information sources	
	8	Search	
	9	Selection of sources of evidence	✓
	10	Data charting process	
	11	Data items	
	12	Critical appraisal of individual sources of evidence	
	13	Synthesis of results	
Results	14	Selection of sources of evidence	
	15	Characteristics of sources evidence	
	16	Critical appraisal within sources of evidence	✓
	17	Results of individual sources of evidence	
	18	Synthesis of results	
Discussion	***19***	***Summary of evidence***	◀
	20	Limitations	
	21	Conclusions	
Funding	22	Funding	

Tips for reporting this item:

- Summarize main findings and link them to the original review questions and objectives
- Tailor overall findings of the scoping review to the relevant knowledge users such as policymakers, health care providers and patients or consumers

Example:

"In this scoping review we identified 88 primary studiesaddressing dissemination and implementation research across various settings of dementia care published between 1998 and 2015. Our findings indicate a paucity of research focusing specifically on dissemination of knowledge within dementia care and a limited number of studies on implementation in this area. We also found that training and educating professionals, developing stakeholder interrelationships, and using evaluative and iterative strategies are frequently employed to introduce and promote change in practice. However, although important and feasible, these strategies only partly address what is repeatedly highlighted in the evidence base: that organisational factors are reported as the main barrier to implementation of knowledge within dementia care. Moreover, included studies clearly support an increased effort to improve the quality of dementia care provided in residential settings in the last decade."

Lourida I, Abbott RA, Rogers M, Lang IA, Stein K, Kent B. et al. Dissemination and implementation research in dementia care: a systematic scoping review and evidence map. BMC Geriatr. 2017;17:147. [PMID:28709402] doi: 10.1186/s12877-017-0528-y

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 20: LIMITATIONS

Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
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	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	***Limitations***
	21	Conclusions
Funding	22	Funding

Tips for developing this item:

- Focus on limitations of the review process as well as the extent of information uncovered
- Make note of any deviations from guidelines or the protocol along with rationales and their potential effect on the results

Example:

"Our scoping review has some limitations. To make our review more feasible, we were only able to include a random sample of rapid reviews from websites of rapid review producers. Further adding to this issue is that many rapid reviews contain proprietary information and are not publicly available. As such, our results are only likely generalizable to rapid reviews that are publicly available. Furthermore, this scoping review was an enormous undertaking and our results are only up to date as of May 2013."

Tricco AC, Antony J, Zarin W, Strifler L, Ghassemi M, Ivory J, et al. A scoping review of rapid review methods. BMC Med. 2015;13:224.[PMID: 26377409] doi:10.1186/s12916-015-0465-6

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 21: CONCLUSIONS

Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications or next steps.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
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	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	***Conclusions***
Funding	22	Funding

Tips for reporting this item:

- Discuss the results in relation to current literature, practice and policy
- Discuss potential implications of the review
- Provide recommendations for future research, such as a more focused systematic review when applicable
- Link the interpretation of the results to the review question and objectives
- Note that recommendations for practice and policy will not be relevant for most scoping reviews as the goal is to provide a preliminary map of the evidence without appraising the quality and validity of the results

Example:

"The lack of evidence to support physiotherapy interventions for this population appears to pose a challenge to physiotherapists. The aim of this scoping review was to identify gaps in the literature which may guide a future systematic review. However, the lack of evidence found means that undertaking a systematic review is not appropriate or necessary […]. This advocates high quality research being needed to determine what physiotherapy techniques may be of benefit for this population and to helpguide physiotherapists as how to deliver this."

Hall AJ, Lang IA, Endacott R, Hall A, Goodwin VA. Physiotherapy interventions for people with dementia and a hip fracture—a scoping review of the literature. Physiotherapy. 2017;103:361-8. [PMID:28843451] doi: 10.1016/j.physio.2017.01.001

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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ITEM 22: FUNDING

Describe the sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.

Title	1	Title
Abstract	2	Structured summary
Introduction	3	Rationale
	4	Objectives
Methods	5	Protocol and registration
	6	Eligibility criteria
	7	Information sources
	8	Search
	9	Selection of sources of evidence
	10	Data charting process
	11	Data items
	12	Critical appraisal of individual sources of evidence
	13	Synthesis of results
Results	14	Selection of sources of evidence
	15	Characteristics of sources evidence
	16	Critical appraisal within sources of evidence
	17	Results of individual sources of evidence
	18	Synthesis of results
Discussion	19	Summary of evidence
	20	Limitations
	21	Conclusions
Funding	***22***	***Funding***

Tips for reporting this item:

- Document the sources of funding reported in the individual evidence source
- Report all sources of funding received to conduct the current scoping review
- Describe any role of the funders in the scoping review
- Report the contract number for the funding source if applicable

Example:

Click the image below to expand the figure.

Funding source type	Industry-sponsored	2 (2.4%)
	Non-sponsored	3 (3.6%)
	Not reported	13 (15.5%)
	Public-sponsored	66 (7[illegible]6%)

"This study was funded by Alliance for Health Policy and Systems Research, World Health Organization, Geneva, with support from the Norwegian Government Agency for Development Cooperation, the Swedish International Development Cooperation Agency and the UK Department for International Development."

Tricco AC, Zarin W, Rios P, Nincic V, Khan PA, Ghassemi M. et al. Engaging policy-makers, health system managers, and policy analysts in the knowledge synthesis process: a scoping review. Implement Sci. 2018;13:31

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. Ann Intern Med. 2018;169:467–473. doi:10.7326/M18-0850

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