International Journal of Law and Psychiatry 57 (2018) 91–99

Contents lists available at ScienceDirect

International Journal of Law and Psychiatry

Self-regulation and the specificity of autobiographical memory in offenders☆

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ARTICLE INFO

Article history:
Received 12 July 2017
Received in revised form 9 January 2018
Accepted 10 January 2018
Available online xxxx

Keywords:
Autobiographical memory
Overgeneral
Offenders
Self-regulation
Executive control
Emotions

ABSTRACT

Certain clinical populations exhibit an Overgeneral Autobiographical Memory (OAM), characterized by difficulty remembering specific events. One study has observed OAM for positive events in a group of offenders. This study analyzed the stability of the valence effect in the OAM of offenders, the executive control impairments facilitating OAM in offenders, and the relationship of self-esteem and social desirability with AM specificity. The specificity (Autobiographical Memory Test) and emotional properties of the AMs of 59 prisoners (30 men, 29 women) and a control group (29 men, 30 women) were compared. Social desirability, depression symptoms, self-esteem and executive functions (Mazes, Stroop, Verbal Fluency) were assessed. The offenders recalled fewer specific positive AMs than controls, and did not perceive the emotional intensity of their negative AMs to decrease over time, unlike the controls. The offenders' recall of specific negative AMs seemed to influence negatively their performance in the subsequent executive control tasks. Dysfunctional coping strategies in offenders were related to OAM, but not social desirability or self-esteem.

1. Introduction

Autobiographical memory (AM), the memory of events from one's personal past, generally functions as to contribute to the stability of identity, to the achievement of goals and to the promotion of well-being (e.g., Bluck, Alea, & Demiray, 2010; Conway, Singer, & Tagini, 2004; Holland & Kensinger, 2010; Singer & Salovey, 1993). Nonetheless, a potentially detrimental phenomenon known as Overgeneral Autobiographical Memory (OAM) has been observed in various clinical groups. OAM, first reported by Williams and Broadbent (1986) in individuals who had attempted suicide, is the recall of general categories of events when a specific episode (a single event lasting less than a day) was requested. There are two main types of generic AMs: categoric (repeated events aggregated in a general memory with a common theme, e.g., "walking my dog") and extended (a single event that lasted longer than a day, e.g., "my last summer vacation") (Williams & Dritschel, 1992). The OAM phenomenon first caught the investigators' attention because the recall of specific AMs seems to be relatively easy for the general population. According to Conway (2005), autobiographical recall usually starts at the generic memories level, followed by a search for related episodic memories. However, the search could become blocked in certain situations and end with a generic memory. OAM is a specific phenomenon and not a simple manifestation of more general memory impairments (Williams et al., 2007).

OAM has been associated with psychological disorders such as depression (e.g., Kuyken & Dalgleish, 2011), posttraumatic stress disorder (e.g., McNally, Lasko, Macklin, & Pitman, 1995), and alcoholism (e.g., D'Argembeau, Van Der Linden, Verbanck, & Noël, 2006). Furthermore, OAM has been related to more serious prognoses and difficulties envisioning future situations and solving social problems (e.g., Beaman, Pushkar, Etezadi, Bye, & Conway, 2007; see Williams et al., 2007, for a review).

A few researchers have proposed the study of common underlying causes for different types of deviant behavior (e.g., DeCoster, 2003; Maruna, 2001). DeCoster (2003) went as far as to propose a parallel between delinquency and depression, proposing that social context determines different types of dysfunctional responses to identical risk factors, such as a negative identity, dysfunctional relationships or inadequate responses to stress. According to these approaches, some risk factors associated with different psychopathologies could also be associated with antisocial behavior. One of those risk factors could be OAM, since Spinhoven, Bockting, Kremer, Schene, and Williams (2007) proposed that the phenomenon could be related to common aspects of different expressions of psychopathology, such as cognitive and motivational deficits. The phenomenon of OAM, although observed in different pathologies, was not adequately researched in populations with antisocial behavior yet.

Recently, Neves and Pinho (2016) explored if convicted offenders could also present an OAM, as they often suffer from impairments in executive control (e.g., Meijers, Harte, Jonker, & Meynen, 2015; Morgan &

☆ **Funding**: This work was supported by a PhD studentship attributed by the *Fundação para a Ciência e a Tecnologia* (FCT, SFRH/BD/68955/2010, Programa Operacional Potencial Humano, POPH) with the support from the European Social Fund.

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https://doi.org/10.1016/j.ijlp.2018.01.005
0160-2527/

Lilienfeld, 2000; Ross & Hoaken, 2011), considered as one of the main explanations for an OAM (Williams, 2006; Williams et al., 2007). In fact, the offenders recalled less episodic AMs than the controls did, but only for the positive valence. They also rated their negative AMs as being more emotionally disturbing at the moment of recall than controls. Thus, there seems to be a negative bias in the AM of the sample of offenders. According to Conway and Pleydell-Pearce's (2000) Self-Memory System model, AMs that are consistent with current self-representations and are important to current goals are more accessible than other AMs. Self-discrepant AMs can create cognitive dissonance (Beike & Landoll, 2000) and be more difficult to remember or inhibited. However, in the general population AM tends to be positively biased due to the importance of a positive self-concept to well-being. People generally remember more positive than negative experiences. Furthermore, although negative emotions from AMs decrease significantly over time, positive emotions are more likely to maintain their intensity (e.g., D'Argembeau & Van der Linden, 2008; Rubin & Berntsen, 2003; Walker, Skowronski, & Thompson, 2003; Wood & Conway, 2006). Neves and Pinho (2016) suggest that, given the greater difficulty in retrieving AMs incongruent with the self-concept, the self-concept of offenders could be relevant to understand the lower specificity of their positive AMs. Some studies have presented evidence of a relationship between antisocial behavior and negative self-concept or low self-esteem (e.g., Donnellan, Trzesniewski, Robins, Moffitt, & Caspi, 2005). A negative self-concept and a low self-esteem may enhance the accessibility of negative AMs, while rendering specific positive AMs less accessible, but this potential relationship was not yet explored in offenders.

According to associative network models, memories, thoughts, beliefs, emotions and behaviors of a particular valence are related in such a manner that the activation of one element of the network could activate other elements (e.g., Berkowitz, 1990). The repeated activation of a network associated with a certain type of emotion, such as anger, will make that type of information more accessible and increase its influence over mood and behavior (Bushman, Bonacci, Pedersen, Vasquez, & Miller, 2005; Miller, Pederson, Earleywine, & Pollock, 2003). Thus, if negative AMs in offenders, particularly those inducing frustration and anger, remain highly accessible and maintain their emotional intensity over time, those negative AMs could activate cycles of angry ruminative thinking and increase the probability of aggressive behavior (Baumeister & Heatherton, 1996; Miller et al., 2003).

In fact, the emotional regulation efforts required by negative ruminative thoughts can drain the capacity for self-regulation (processes involved in the adaptation of emotions and behaviors to facilitate goal attainment, address environmental demands or adhere to internalized social norms, Berger, 2011). As self-regulation is a limited capacity, when it becomes temporarily depleted, if individuals (particularly those with low self-regulation capacity) faced an event that required self-control, they would not be able to exercise it (Baumeister & Heatherton, 1996; DeWall, Baumeister, Stillman, & Gailliot, 2007). Other studies (see Berger, 2011 for a review) have observed predictive relationships between self-regulation deficits (namely in the inhibitory control of behavior and the regulation of negative emotions) and behavioral problems (such as aggression). Since self-regulation involves a group of skills necessary for successful goal-oriented behavior, Hofmann, Schmeichel, and Baddeley (2012) considered executive control to underlie successful self-regulation.

Insufficiencies in executive control also increase the difficulty of searching for a specific AM when the search involves effort, increasing failures in the inhibition of irrelevant knowledge. Consequently, the search can become blocked at the level of general events in the AM (Conway & Pleydell-Pearce, 2000; Dalgleish et al., 2007; Williams et al., 2007). Impaired executive control (X) is one of the three primary sources of OAM according to the CaRFAX model (Williams, 2006; Williams et al., 2007), alongside with capture and rumination (CaR), and functional avoidance (FA). Rumination may be activated in people prone to it if the cues used to search for an event are related to dysfunctional self-schemas (e.g., Barnhofer, Crane, Spinhoven, & Williams, 2007; Spinhoven et al., 2007). Ruminative thought controls attention and, ultimately, interrupts the search for a specific AM. Functional avoidance is a coping strategy in which individuals quit the search for a specific AM to attempt to avoid possible adverse emotions. The potential difficulties recalling episodic AMs in offenders could be related to executive impairments, namely in inhibition, which plays an important role in the successful recall of episodic AMs (e.g., Neshat-Doost et al., 2008; Raes, Verstraeten, Bijttebier, Vasey, & Dalgleish, 2010). Neves and Pinho (2016) used only verbal fluency to assess executive capacity. They observed the predicted relationship between lower verbal fluency and a higher proportion of generic positive AMs in offenders, but only in the male sample.

The exploratory study here presented was conceived with the general objective of testing if the pattern of OAM only for the memories of positive valence in offenders could be replicated, since valence differences in OAM have only been found in a small part of the studies with clinical samples (see Williams et al., 2007 for a review). Moreover, this study had several specific aims: a) to analyze the patterns of specificity and emotional intensity in personally significant AMs of offenders (researchers suggest that a true AM should be personally significant, e.g., Bluck & Habermas, 2001, Nelson & Fivush, 2004), and whether they agree with those found by Neves and Pinho (2016); b) to explore whether the positive affect bias of AM (positive AMs perceived as maintaining and negative AMs as decreasing their emotional intensity over time) can be observed in the control samples, but not in the offenders; c) to investigate the relationship between differences in AM specificity and in the executive functions of offenders and controls (particularly, inhibition and approach to problem-solving); d) to explore whether social desirability, particularly in offenders, could influence or invalidate their results in AM tests; e) to explore whether there is a relationship between low self-esteem and less specific AMs of positive valence in offenders.

We expected this study to replicate and to amplify the previously observed pattern of positive valence OAM in offenders. The instrument used in this study to assess AM specificity (Autobiographical Memory Test, AMT; Williams & Broadbent, 1986) has a time limit and creates constraints on the type of AMs eligible for each cue, unlike the test used by Neves and Pinho (2016) (*TEMPau*, Piolino, Desgranges, & Eustache, 2000). Thus, if offenders have difficulty accessing specific positive AMs, unlike people in the general population, using an AM test that requires more cognitive effort, should make the differences between the samples in AM specificity more clear. We also expected the group of offenders to rate their negative AMs as having greater emotional intensity and for that intensity to decrease less over time, when compared with controls, suggesting an absence of the positive affect bias of AM in the AM of offenders.

Finally, this study selected samples of individuals of both female and male genders and conducted data analyses considering gender as a variable, since Neves and Pinho (2016) observed gender differences in the specificity and emotional properties of the AMs of their samples. When studies report gender differences, AMs recalled by women tend to be more detailed, more accessible and more emotionally intense than men's recall (e.g., Davis, 1999; Heron et al., 2012). However, given that the positive OAM phenomenon was observed in offenders of both genders and that gender differences are not always observed in studies on AM and are often small when reported (Grysman & Hudson, 2013), the analysis of gender differences was not one of the main aims of the study.

2. Method

2.1. Participants

The participants in this study were 59 convicted offenders (30 men and 29 women recruited from two prisons) and 59 individuals from the general population (29 men and 30 women). Almost all of the