

Gaslighting and its application to interpersonal violence

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ABSTRACT:

The study examines the nature of gaslighting and how it relates to interpersonal aggression.

It does so first through application of a Rapid Evidence Assessment (REA) to understand how gaslighting is understood academically. This RAE captured 50 articles, with 12 retained for thematic review. Results were then used to develop a Gaslighting Behaviour Measure, which was then applied in an online study of adults (n = 386; 77.2% women).

Five themes were identified from the REA; Components of gaslighting; Gaslighting as a tool for abuse; Perpetrators as damaged manipulators; Experiences and characteristics of victims; and Institutional and racial gaslighting. In the ensuing study, results demonstrated that emotional abuse was broadly related both to the perpetration and experiencing of gaslighting, indicating that it may represent an extension of emotional abuse. The relationship to trait aggression was limited and primarily isolated to victims presenting with higher levels of trait aggression capturing more emotional components (e.g. anger/hostility).

The importance of context in understanding the relationship between gaslighting, emotional abuse and aggression was indicated, with some complexity found. Suggestions for future research are made.

- Accounting for context in understanding gaslighting is key.

- Developing and validating measures for gaslighting would assist with the evaluation of this behaviour.

- When working with those who have a history of emotional abuse, considering gaslighting as a further element is potentially important.

- It should not be assumed that gaslighting has an association with non-emotional aggression; the type of relationship where it is occurring is important.

CUST_SOCIAL_IMPLICATIONS_(LIMIT_100_WORDS) :No data available.

This study is the first to consider the development of a gaslighting measure, which is informed by a methodological review of the literature.

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3 RUNNING TITLE: GASLIGHTING AND IPV
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12 Disclosure statement: None of the authors have competing interests to disclosure
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Abstract

The study examines the nature of gaslighting and how it relates to interpersonal aggression. It does so first through application of a Rapid Evidence Assessment (REA) to understand how gaslighting is understood academically. This RAE captured 50 articles, with 12 retained for thematic review. Results were then used to develop a Gaslighting Behaviour Measure, which was then applied in an online study of adults ($n = 386$; 77.2% women). Five themes were identified from the RAE; Components of gaslighting; Gaslighting as a tool for abuse; Perpetrators as damaged manipulators; Experiences and characteristics of victims; and Institutional and racial gaslighting. In the ensuing study, results demonstrated that emotional abuse was broadly related both to the perpetration and experiencing of gaslighting, indicating that it may represent an extension of emotional abuse. The relationship to trait aggression was limited and primarily isolated to victims presenting with higher levels of trait aggression capturing more emotional components (e.g. anger/hostility). The importance of context in understanding the relationship between gaslighting, emotional abuse and aggression was indicated, with some complexity found. Suggestions for future research are made.

Key words: Gaslighting; partner violence; emotional abuse; trait aggression; AQ; MMEA; GBQ

Gaslighting and its application to interpersonal violence

The origins of the term *gaslighting* generates from a play by Patrick Hamilton (1939) called *Gas Light*, in which a protagonist is confronted for manipulative behaviour which is denied and the accuser is subjected to a variety of covert abusive tactics including threats, shaming, projecting blame, anger, and feigning ignorance/confusion in order to have them committed to an asylum. The plays protagonist displays tactics affiliated with gaslighting behaviour, as it is described today (Barton & Whitehead, 1969; Dorpat, 1996), with the accuser's response representative of how many victims of gaslighting are understood in the academic literature (Dorpat, 1969; Gass & Nichols, 1988).

One of earliest academic accounts of gaslighting appears that of Barton and Whitehead (1969) through two case studies of men who had been subjected to covert forms of abuse by their wives. Both men were originally admitted to hospital with accusations of violence and aggression, which they denied. Once admitted, both displayed symptoms of mild depression and anxiety, yet no other violent or unstable tendencies. Mild depression and anxiety are now believed to be common symptoms for victims of gaslighting (Gass & Nichols, 1988). Soon, it was discovered that their wives had been unfaithful but were denying this behaviour to their husbands. When one of the men confronted his wife about her infidelity, she told him to "not be silly", and accused him of being "a drunk" who should be "locked away" (Barton & Whitehead, 1969, p. 1259). Such minimisation and threatening tactics are thought commonly used by the perpetrators of gaslighting (Abramson, 2014; Dorpat, 1996; Gass & Nichols, 1988).

Other examples of gaslighting identify similar instances of people being manipulated with the purpose of hospital admission (Lund & Gardiner, 1977; Smith & Sinanan, 1972). Smith and Sinanan (1972), for example, discuss cases of women admitted to psychiatric care because of

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3 induced psychosis or severe depression, which manifested solely as a result of their husbands'
4 repeated and covert manipulation. In one case, the husband tried to convince his wife of her
5 'madness' and threatened to have her committed to hospital (Smith & Sinanan, 1972, p. 686). Once
6 she arrived at the hospital, "it became apparent to the treatment team that he was trying to induce
7 illness in his wife" (Smith & Winanan, 1972, p. 686). Of significance, Barton & Whitehead (1969)
8 is one of the few examples that discusses instances of men being victims of gaslighting, as most
9 written accounts of gaslighting focus on cases in which men perpetrate such abuse towards women
10 (Abramson, 2014; Calef & Weinshel, 1981; Dorpat, 1996; Gass & Nichols, 1988). Evidence tends
11 to suggest that women are more likely to be victims rather than perpetrators of gaslighting (Dorpat,
12 1996; Gass & Nichols, 1988), that this form of abuse can occur in a variety of interpersonal
13 relationships, and especially when there is a power difference evidenced e.g. in marriages, the
14 workplace, in politics (Abramson, 2014; Simon, 2010; Gibson, 2017).

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31 Case studies describing gaslighting have proved useful in attempting to operationalise the
32 components of such abuse. The term gaslighting has seemingly evolved from describing behaviour
33 that focuses on convincing someone of their "insanity" (Hamilton, 1939), to a wider range of
34 covert manipulative behaviours prevalent across interpersonal relationships (Abramson, 2014;
35 Dorpat, 1996). Calef and Weinshel (1981) were the first clinicians to put forward the idea that
36 gaslighting is better understood as an instance of *projective identification*, namely a defence
37 mechanism where negative emotions or unwanted self-perceptions of the gaslighter are projected
38 onto their victim. Dorpat (1996) also incorporated this view in their definition of gaslighting,
39 extending it to group as well as individual behaviour and defining it as a, "type of projective
40 identification in which an individual (or group of individuals) attempt to influence the mental
41 functioning of a second individual by causing the latter to doubt the validity of his or her
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3 judgments, perceptions, and/or reality testing in order that the victim will more readily submit his
4 [sic] will and person to the victimizer.” (p. 6). Contemporaneously, the concept of gaslighting is
5
6 viewed as complex form of psychological manipulation where one individual’s behaviour
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8 (whether intentional or unintentional) undermines another’s reality through a variety of repetitive
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10 and emotionally manipulative techniques, including minimising, threats, and feigning
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12 ignorance/confusion (Barton & Whitehead, 1969; Calef & Weinshel, 1981; Dorpat, 1969; Riggs
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14 & Bartholomaeus, 2018). Gaslighting as a term has also seen renewed popularity in describing the
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16 behaviour of some politicians and journalists (Gibson, 2017; Avila, 2018).
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22 Finally, research exploring gaslighting has focused on victims, particularly within the
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24 intimate relationship domain, rather than capturing perpetrators. It is, for example, possible that
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26 the perpetrators of this abuse may show proclivity for perpetrating other forms of emotional abuse
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28 or aggression (Abramson, 2014; Simon, 2011). This is, as yet, unaddressed, with the association
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30 between gaslighting and aggression surprisingly unresearched. Focus instead has been on the
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32 psychological abuse experiences of victims (e.g. Wozolek, 2018). There has also been no attempt
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34 to integrate the research into a wider body of literature on indirect aggression, namely that which
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36 occurs when the intent and/or perpetrator can be hidden (Archer & Coyne, 2005). Indirect
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38 aggression is a widely accepted concept in the aggression literature (see Björkqvist, 1994;
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40 Björkqvist et al, 1994; Salmivalli, C. & Kaukiainen, 1994; Simmons, 2003). The lack of attention
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42 to this in terms of how gaslighting can represent a further extension of this is perhaps surprising.
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47 The current study aims to consider what is understood by gaslighting academically and
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49 how this relates to other behaviours of concern, namely aggression. To achieve this, it includes a
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51 Rapid Evidence Assessment (REA) (Study 1), used to inform the development of a Gaslighting
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53 Behaviour Measure. This is then employed in an online study of adults, exploring its association
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3 with measures of aggression and emotional abuse. Perpetration of gaslighting is expected to be
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5 predicted by increased trait aggression and the perpetration of emotional abuse, whereas
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7 experiencing gaslighting was expected to be predicted by an increased experience of emotional
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9 abuse.
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11 12 **Study one: Understanding Gaslighting – A Rapid Evidence Assessment**

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15 The REA followed the guidelines set out by Barends et al., 2017, to examine the literature
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17 and identify behaviours that could be used to describe and measure gaslighting. The keyword
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19 ‘gaslighting’ was searched across three databases (PsychINFO, PsycARTICLES, and Google
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21 Scholar), up to a publication/online publication date of 2018. This resulted in 22 results on
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23 PsychINFO and PsychARTICLES combined and 15,600 results on Google Scholar. To refine the
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25 results, search criteria was limited on Google Scholar to published articles containing the word
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27 ‘gaslighting’ in the article title. This yielded 28 results. To be considered for inclusion, the articles
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29 needed to be available to the author in full-text and written in English. Duplicate articles were not
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31 included. Fifty articles were identified, 21 of which were available in full text. Once the abstracts
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33 of these articles were screened for relevance, 12 eligible articles were included.
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37 38 **Results**

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40 Seven articles reviewed the existing literature on gaslighting and used clinical observations
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42 to identify a theoretical framework, mechanisms, and outcomes of gaslighting behaviour. Three
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44 discussed case studies, and one comprised personal reflections of those targeted by institutional
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46 gaslighting. The remaining article was a survey analysis, exploring victim experiences. Each of
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48 the 12 articles included in the REA are marked using a * in the references. Five overarching
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50 themes were identified using thematic analysis following the expectations of Braun & Clarke
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52 (2006) that incorporated their steps of becoming familiar with the data, generating initial codes,
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3 searching for themes, reviewing themes, defining themes and preparing their written construction.

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5 The five identified themes were; Components of gaslighting; Gaslighting as a tool for abuse;
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7 Perpetrators as damaged manipulators; Experiences and characteristics of victims; and
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9 Institutional and racial gaslighting. A brief outline of each theme follows:
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12 *Theme 1: Components of gaslighting.* Roberts & Andrews (2013) outline five components
13 required, which they argue are consistent across context; 1.) A gaslighter, 2.) A gaslightee (victim),
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15 3.) An object/focus of the manipulation, 4.) Reward for the gaslighter, 5.) A negative consequence
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17 for the gaslightee. Using a case study offered by Barton & Whitehead (1969), which describes an
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19 elderly woman secretly being given laxatives by the frustrated administrator of a nursing home,
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21 and then admitted to a psychiatric hospital, Roberts & Andrews (2013) illustrated each component
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23 as follows; 1.) Gaslighter: nursing home administrator, 2.) Gaslightee: nursing home patient, 3.)
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25 Object of manipulation: medication/doctor, 4.) Reward: absolution of caretaking responsibilities,
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27 5.) Consequence for gaslightee: committal to psychiatric ward.
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33 *Theme 2: Gaslighting as a tool for abuse.* Abramson (2014) describes gaslighting as a
34 unique tool of covert emotional abuse and psychological manipulation, used to convince a target
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36 that their “reactions, perceptions, memories and/or beliefs are not just mistaken, but utterly without
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38 grounds—paradigmatically, so unfounded as to qualify as crazy” (Abramson, 2014, p. 2). In doing
39
40 so, the aim is to challenge their reality and make them a victim of gaslighting. This was supported
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42 by Riggs & Bartholomaeus (2018), who identify gaslighting as a manipulative tool used in identity
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44 abuse, as a means of controlling or belittling them. In addition, Ahern’s (2018) exploration of
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46 gaslighting describes it as being a tool of *institutional* betrayal, which can occur when one party
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48 trusts another party and is therefore dependent on them for safety, money, or housing. The
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50 institutional betrayal occurs when the harmed party raises a concern but is exploited for their
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3 dependency through gaslighting tactics, such as denying wrongdoing despite objective evidence,
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5 claiming that the victim is overreacting, lying, minimising, or wrong (Ahern, 2018). In addition,
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7 Thomas (2017) and Wozolek (2018) both provide personal accounts of how their respective
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9 institutions gaslighted them, with themes of dismissed concerns, false allegations, ostracising, and
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11 changing rules and regulations to fit with their aims.
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15 *Theme 3: Perpetrators as damaged manipulators.* Although perpetrators of gaslighting use
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17 a plethora of manipulative behaviours, they may not all be “evil-doing caricatures” intent on
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19 harming their victims (Abramson, 2014, p. 12). Abramson (2014) suggests that perpetrators of
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21 gaslighting may be highly anxious or fear challenges to their self-perception or reality. Therefore,
22
23 in order to eliminate any possibility of disagreement, they may project their own reality on to their
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25 victim by using several manipulative behaviours. This is also captured via philosophical
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27 interpretations, with Spears (2020) exploring distortions of recall as a feature and perpetrators,
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29 through their behaviour, experiencing a more coherent sense of self, or a better self-image, whilst
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31 also giving the perpetrator continued agency to behave in a manipulative manner towards others.
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33 It is also possible that the perpetrator may not know that they are engaging in manipulative
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35 behaviours (Riggs & Bartholomaeus, 2018; Abramson, 2014), but will remain aligned to their
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37 distorted/projected reality to manage/prevent any negative cognitions and emotions that may
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39 emerge (Abramson, 2014).
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45 *Theme 4: Experiences and characteristics of victims.* This area is better documented in
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47 comparison to perpetrators (Riggs & Bartholomaeus, 2018; Abramson, 2014; Gass & Nichols,
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49 1988) and focused on women as victims and men as the perpetrators. It is also still reliant to a
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51 degree on interpretation as opposed to empirical evidence. For example, Abramson (2014) and
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53 Gass & Nichols (1988) note how women are more likely to be gaslighted than men, hypothesising
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3 it is a product of inherent power distance between men and women perpetuated by sexism
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5 (Abramson, 2014), and that any attempt by the woman to challenge the gaslighter (in an intimate
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7 relationship) is met with denial or being belittled (Gass & Nichols, 1988). Regardless, there is a
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9 developing acceptance that gaslightees are likely to experience several negative outcomes, such as
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11 anxiety, guilt, depression, grief, and at times, psychosis (Abramson, 2014), suicidal
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13 ideation/behaviour (Riggs & Bartholomaeus, 2018) with a loss of identity and reality (Gass &
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15 Nichols, 1988). Children are also recognised as especially vulnerable to becoming victims of
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17 gaslighting (Riggs & Bartholomaeus, 2018). Men have, however, been captured in more recent
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19 research. Bates (2019) considered the experiences of 161 men, who had experienced domestic
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21 abuse from their female partners. An impact on mental health was clearly noted, with one
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23 participant stating how, “I ended up essentially a wreck, not trusting my own memory or
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25 interpretation of events, constantly uncertain of myself and [not] quite [sure] what was ‘real’ or
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27 not.” (Bates, 2019, p. 7).
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33 *Theme 5: Institutional and racial gaslighting.* Gaslighting have also been explored within
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35 systemic racial abuse (Roberts & Andrews 2013; Davis & Ernst, 2017; Tobias & Joseph, 2018)
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37 and the workplace (Thomas, 2017; Wozolek, 2018), with the latter increasingly referred to as
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39 ‘racial gaslighting’. It includes directing non-White individuals to complete (unrequired)
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41 additional tasks to meet expectations (Roberts & Andrews, 2013). To demonstrate how systemic
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43 racism continues to be maintained through gaslighting, Tobias & Joseph (2020) coded 27 news
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45 articles through a Critical Discourse Analysis (CDA). This identified several instances of
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47 gaslighting used by the police and media in the area, including forcing non-White participants to
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49 be open to being stopped and asked questions by the police regardless of having a reason, and then
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denying there was any racism in the approach and defending the actions by suggesting it was to prevent crime, when no such evidence existed (Tobias & Joseph, 2020).

Study two: Exploring the association between abuse, aggression and gaslighting

The REA highlighted how the current literature on gaslighting is sparse, lacking in empirical study, and with limited focus on application across contexts. There was also no attempt at developing a measure of gaslighting that could be used to capture the nature of this behaviour across context more fully. Study two attempts to address this, building on the REA by examining empirically the nature of gaslighting across context and its association with broader considerations of abuse (i.e. emotional abuse and aggression) to determine if gaslighting is consistent with these broader conceptualisations, or representative more of a unique form of abuse.

Method

Participants

These were recruited online, across a variety of social media platforms. A total of 654 attempted the survey, with 386 completing (response rate=59%). The age range was from 18-72 years ($M=33.73$, $SD=13.74$). Most identified as female (77.2%), with the remainder identifying as male (20.2%) or nonbinary (2.1%). One participant identified as 'trans' and one preferred not to say.

Measures

The following measures were employed:

Aggression Questionnaire (AQ; Buss & Perry, 1992). This self-report measure consists of 29 items comprising physical aggression, verbal aggression, anger, and hostility. The overall measure

demonstrated good internal consistency ($\alpha=.89$). Each item was scored on a 5-point Likert scale ranging from very unlike me (1) to very like me (5).

Multidimensional Measure of Emotional Abuse (MMEA) (Murphy & Hoover, 1999; Murphy, Hoover, & Taft, 1999). This self-report measure consists of 28 items, used to assess perpetrated and experienced emotional abuse. Total scores were used, with good internal consistency for total MMEA perpetration scores ($\alpha=.93$) and total MMEA victim scores ($\alpha=.92$). All items were rated by participants on a 5-point Likert scale for frequency (never to almost always).

Gaslighting Behaviour Questionnaire (GBQ). This is a newly developed self-report questionnaire, created using information gathered from the literature review and REA (Study 1). It comprised 10 items considering gaslighting scenarios, across three contexts; intimate partners, work colleagues, and close friends. These were completed with regards to both perpetration and experience. Participants completed the frequency by which they engaged in/experienced each item on a 5-point Likert scale, ranging from (0) never to always (4). Internal consistency ranged from $\alpha = .86$ to $.95$.

Procedure

Ethical approval for this study was obtained from the University of Central Lancashire. Participants were recruited across a variety of social media platforms, with the survey completed online, using Qualtrics.

Results

Means, standard deviations and reliabilities for all measures are presented in Table 1.

<Insert Table 1 here>

Several Principal Component Analyses of the Gaslighting (GBQ) items were undertaken, using Varimax rotation. These were completed separately for the perpetrator and victim items, and across the three contexts captured, namely intimate partner, close friend and work colleagues. The

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3 results are presented in Table 2 (Victim items) and Table 3 (Perpetrator items), along with factor
4 descriptions and factor scores. Factor scores comprised all items loading above .50 on each factor.
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6 Scree plots for all analyses limited factors to two. In relation to GBQ victim items, factor structure
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8 was replicated across the different contexts (intimate partner, close friend, work colleague). Two
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10 factors emerged; one comprising of seven items described as ‘promoting self-doubt, confusion and
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12 blame’ and one comprising three items, described as ‘altering recollection of behaviour’. There
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14 were structural differences noted in relation to the perpetrator items. In relation to intimate
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16 partners, two factors emerged; factor 1, comprised of seven items, described as ‘encouraging
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18 confusion over recollection and self-identity’ and Factor 2, comprising three items and
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20 representing ‘manipulation of emotions and encouraging self-blame’. These were not replicated in
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22 the close friend perpetrator items, which actually shared more similarity to the victim items. Two
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24 factors emerged, Factor 1 comprising of six items, and sharing the same description as the victim
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26 items, ‘promoting self-doubt, confusion and blame’ and Factor two, including three items and
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28 described as ‘altering recollection of behaviour and self-identify’. Although similar to the victim
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30 items, this extended to capture self-identity. The work colleagues’ factor structure was notably
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32 similar to the victim structure, replicating the factor descriptions as ‘promoting self-doubt,
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34 confusion and blame’ (Factor 1, 7 items) and ‘altering recollection of behaviour’ (Factor 2, 3
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36 items).
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47 A series of standard multiple regression analyses were conducted to determine if total
48 emotional abuse (MMEA), total trait aggression (AQ) and the subscales of the AQ (physical
49 aggression, verbal aggression, hostility and anger) predicted gaslighting. The subscales of the
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51 AQ were entered into their own regression and not with the AQ total, to avoid multicollinearity.
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Regressions were completed for overall levels of gaslighting and across each gaslighting factor. It was completed separately for each context of gaslighting; intimate partners, close friend and work colleague. Variables were entered using the Enter command with the predictor representing gaslighting.

Total gaslighting

Regarding total gaslighting, the model considering being a victim of gaslighting was significant ($F(3, 385) = 41.9, p < .0001$), with higher levels of trait aggression ($t = 1.99, p = .046, B = .16, SE = .08, \beta = .11$) and being a victim of emotional abuse ($t = 7.51, p < .0001, B = .42, SE = .056, \beta = .37$) predicting more gaslighting experiences. Perpetration of emotional abuse was not a predictor ($t = 1.83ns$). Across the subscales of the AQ the model for being a victim of gaslighting was significant ($F(4, 385) = 12.3, p < .0001$), with higher levels of anger ($t = 3.06, p < .002, B = 1.08, SE = .36, \beta = .21$) and higher levels of hostility ($t = 2.56, p < .01, B = .51, SE = .19, \beta = .15$) predicting increased gaslighting experiences. There were no further significant predictors (all t 's $\leq .76$).

The model considering being a perpetrator of gaslighting was significant ($F(3, 385) = 21.59, p < .0001$), with higher levels of emotional abuse perpetration predicting more gaslighting perpetration ($t = 5.43, p < .0001, B = .69, SE = .13, \beta = .34$). There were no further significant predictors (both t 's $\leq .41ns$). Across the subscales of the AQ the model for being a perpetrator of gaslighting was significant ($F(4, 385) = 8.65, p < .0001$), with higher levels of anger ($t = 2.00, p < .046, B = .69, SE = .35, \beta = .14$) and higher levels of verbal aggression ($t = 2.12, p < .03, B = .71, SE = .33, \beta = .13$) predicting increased gaslighting perpetration. There were no further significant predictors (all t 's ≤ 1.01).

Gaslighting across context: Intimate partners

Models considering being a victim of gaslighting in intimate relationships were significant for both gaslighting factors; Factor 1: Promoting self-doubt, confusion and blame ($F(3, 385)=36.5, p<.0001$); Factor 2: Altering recollection of behaviour ($F(3, 385)=34.8, p<.0001$), with being a victim of emotional abuse predicting increased levels of both gaslighting factors (Factor 1: $t=9.18, p<.0001, B=.19, SE=.02, \beta=.46$; Factor 2: $t=9.05, p<.0001, B=.08, SE=.009, \beta=.46$). There were no further significant predictors (all t 's $\leq .44$ ns). Across the subscales of the AQ the model was significant for both factors; Factor 1: Promoting self-doubt, confusion and blame ($F(4, 385)=6.21, p<.0001$); Factor 2: Altering recollection of behaviour ($F(4, 385)=4.34, p<.002$), with higher levels of anger ($t=2.79, p<.005, B=.38, SE=.13, \beta=.198$) predicting Factor 1 gaslighting and higher levels of hostility predicting higher levels of both gaslighting factors (Factor 1: $t=2.44, p<.01, B=.19, SE=.076, \beta=.15$ and Factor 2: $t=2.52, p<.01, B=.08, SE=.03, \beta=.15$). There were no further significant predictors (all t 's ≤ 1.29).

Models considering being a perpetrator of gaslighting in intimate relationships were significant for both gaslighting factors; Factor 1: Encouraging confusion over recollection and self-identity ($F(3, 385)=10.49, p<.0001$); Factor 2: Manipulation of emotions and encouraging self-blame ($F(3, 385)=4.85, p<.003$), with being a perpetrator of emotional abuse predicting increased levels of both gaslighting factors (Factor 1: $t=4.33, p<.0001, B=.18, SE=.04, \beta=.28$; Factor 2: $t=3.33, p<.001, B=.07, SE=.02, \beta=.22$). There were no further significant predictors (all t 's $\leq .32$ ns). Across the subscales of the AQ the model was significant only for Factor 1: Encouraging confusion over recollection and self-identity ($F(4, 385)=3.72, p<.006$) but no coefficients reached significance (all t 's ≤ 1.74).

Gaslighting across context: Close friends

Models considering being a victim of gaslighting from a close friend were significant for both gaslighting factors; Factor 1: Promoting self-doubt, confusion and blame ($F(3, 385) = 19.4, p < .0001$); Factor 2: Altering recollection of behaviour ($F(3, 385) = 21.5, p < .0001$), with being a victim of emotional abuse predicting increased levels of both gaslighting factors (Factor 1: $t = 3.05, p < .002, B = .04, SE = .01, \beta = .16$; Factor 2: $t = 2.76, p < .006, B = .02, SE = .006, \beta = .15$). Being a perpetrator of emotional abuse also predicted increased levels of both gaslighting factors (Factor 1: $t = 3.64, p < .0001, B = .11, SE = .03, \beta = .23$; Factor 2: $t = 3.62, p < .0001, B = .04, SE = .012, \beta = .23$). There were no further significant predictors (all t 's ≤ 1.38 ns). Across the subscales of the AQ the model was significant for both factors; Factor 1: Promoting self-doubt, confusion and blame ($F(4, 385) = 8.90, p < .0001$); Factor 2: Altering recollection of behaviour ($F(4, 385) = 8.72, p < .0001$), with higher levels of anger ($t = 3.44, p < .001, B = .29, SE = .086, \beta = .24$) predicting Factor 1 gaslighting and higher levels of hostility predicting higher levels of Factor 2 ($t = 3.09, p < .002, B = .059, SE = .019, \beta = .18$). There were no further significant predictors (all t 's ≤ 1.82).

Models considering being a perpetrator of gaslighting towards close friends were significant for both gaslighting factors; Factor 1: Promoting self-doubt, confusion and blame ($F(3, 385) = 13.6, p < .0001$); Factor 2: Altering recollection of behaviour and self-identify ($F(3, 385) = 29.97, p < .0001$), with perpetrating emotional abuse predicting increased levels of both gaslighting factors (Factor 1: $t = 4.86, p < .0001, B = .13, SE = .03, \beta = .32$; Factor 2: $t = 6.51, p < .0001, B = .07, SE = .01, \beta = .40$). There were no further significant predictors (all t 's $\leq .60$ ns).

Across the subscales of the AQ the model was significant for both factors; Factor 1: Promoting self-doubt, confusion and blame ($F(4, 385) = 5.01, p < .001$); Factor 2: Altering

recollection of behaviour and self-identity ($F(4, 385) = 10.85, p < .0001$), with higher levels of anger ($t = 2.80, p < .005, B = .219, SE = .078, \beta = .19$) predicting Factor 1 gaslighting perpetration and higher levels of verbal aggression predicting higher levels of Factor 2 ($t = 3.55, p < .0001, B = .108, SE = .03, \beta = .21$). There were no further significant predictors (all t 's $\leq .96$).

Gaslighting across context: Work colleagues

Models considering being a victim of gaslighting from a work colleague were significant for both gaslighting factors; Factor 1: Promoting self-doubt, confusion and blame ($F(3, 385) = 11.8, p < .0001$); Factor 2: Altering recollection of behaviour ($F(3, 385) = 10.8, p < .0001$), with being a victim of emotional abuse predicting increased levels of both gaslighting factors (Factor 1: $t = 2.28, p < .02, B = .05, SE = .02, \beta = .13$; Factor 2: $t = 3.01, p < .003, B = .03, SE = .01, \beta = .17$). Increased trait aggression also predicted increased levels of both gaslighting factors (Factor 1: $t = 2.40, p = .017, B = .08, SE = .03, \beta = .15$; Factor 2: $t = 2.48, p = .014, B = .03, SE = .014, \beta = .16$). There were no further significant predictors (all t 's ≤ 1.29 ns). Across the subscales of the AQ the model was significant for both factors; Factor 1: Promoting self-doubt, confusion and blame ($F(4, 385) = 6.89, p < .0001$); Factor 2: Altering recollection of behaviour ($F(4, 385) = 5.45, p < .0001$), with higher levels of anger ($t = 2.19, p < .029, B = .316, SE = .14, \beta = .15$) predicting Factor 1 gaslighting experiences. The coefficients for Factor 2 were not significant, with no further significant predictors (all t 's ≤ 1.88).

Models considering being a perpetrator of gaslighting from a work colleague were significant for both gaslighting factors; Factor 1: Promoting self-doubt, confusion and blame ($F(3, 385) = 11.4, p < .0001$); Factor 2: Altering recollection of behaviour ($F(3, 385) = 8.10, p < .0001$), with being a perpetrator emotional abuse predicting increased levels of both gaslighting factors (Factor 1: $t = 2.95, p < .003, B = .15, SE = .05, \beta = .19$; Factor 2: $t = 2.08, p = .038, B = .04,$

SE = .02, $\beta = .14$). Increased trait aggression was a predictor of increased levels of gaslighting perpetrator Factor 1 (Promoting self-doubt, confusion and blame; $t = 2.04$, $p < .04$, $B = .07$, $SE = .03$, $\beta = .13$). There were no further significant predictors (all t 's $\leq .60$ ns). Across the subscales of the AQ the model was significant for both factors (Factor 1: Promoting self-doubt, confusion and blame: $F(4, 385) = 6.70$, $p < .0001$); Factor 2: Altering recollection of behaviour ($F(4, 385) = 5.41$, $p < .0001$). There were no significant coefficients in relation to Factor 1. For Factor 2, higher levels of anger ($t = 2.54$, $p < .01$, $B = .10$, $SE = .04$, $\beta = .16$) predicted this form of gaslighting perpetration. There were no further significant predictors (all t 's ≤ 1.51).

Discussion

From the findings presented, the complexity of gaslighting has been shown to include factors broadly falling under a general concept of manipulating an individual's self-perception and events, to create confusion (Barton & Whitehead, 1969; Calef & Weinshel, 1981; Dorpat, 1969; Riggs & Bartholomaeus, 2018). There was clear reference to threats and minimisation as part of this (Abramson, 2014; Dorpat, 1996; Gass & Nichols, 1988), and to creating doubt (Dorpat, 1996). Indeed, the complexity of the behaviour was captured in the REA and noted themes, which included gaslighting as a tool for abuse, perpetrators as damaged manipulators and institutional and racial gaslighting.

From the REA focus on the roles of those involved emerged - as a gaslighter/perpetrator versus a gaslightee/victim - with attention dedicated more to victims than perpetrators. When focus *has* been placed on the perpetrator, it has seemingly been via philosophical and hypothesised interpretations and not empirical evidence (i.e. REA Theme 3: perpetrators as damaged manipulators). Context was clearly demonstrated in the REA to be important, which was further supported via Study 2, where gaslighting was shown to occur across contexts. This was consistent

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3 with previous literature (e.g. Barton & Whitehead, 1969; Dorport, 1996; Smith & Sinanan, 1972),
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5 and further demonstrated the importance of *intimacy* between the parties involved. There was
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7 certainly something distinct between how gaslighting appeared in professional settings (i.e. work
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9 colleagues) versus that taking place when there was arguably intimacy in the relationship (i.e.
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11 intimate partner/close friend), in terms of how this related to emotional abuse and aggression.
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15 Connected to this, there was evidence that those involved in the perpetration of gaslighting
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17 showed proclivity for perpetrating other emotional abuse (Abramson, 2014; Simon, 2011). This,
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19 in itself, supports the use of gaslighting as a tool for abuse, as captured by one of the themes from
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21 the REA (Abramson, 2014; Ahern, 2018; Riggs & Bartholomaeus, 2018; Thomas, 2017; Wozolek,
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23 2018). Interestingly, a role for a raised tendency for trait aggression was not clearly indicated,
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25 suggesting that gaslighting is more closely aligned to emotional aggression (Wozolek, 2018) than
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27 aggression more broadly. The hypothesis that the perpetration of gaslighting would be predicted
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29 by the perpetration of emotional abuse was supported, while the prediction that it would be
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31 predicted by increased trait aggression was not. Surprisingly, although the prediction that
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33 experiencing gaslighting would be predicted by an increased experience of emotional abuse was
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35 supported, there was evidence that victims were also engaging in the emotional abuse of others
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37 and that the more emotional forms of trait aggression (i.e. anger and hostility) were predicting
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39 victims. This suggests that gaslighting as a *perpetrated* behaviour is predicted by proclivity to use
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41 emotional aggression more broadly, whereas gaslighting as an *experienced* behaviour is closely
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43 aligned both to broader experiences of being emotionally abused but also to a higher tendency to
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45 experience trait (emotional) aggression. Of course, it is not possible to indicate what occurred first,
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47 the raised levels of anger and hostility in victims, making them more susceptible to negative and
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49 manipulative feedback on how others see them, or that the levels of anger and hostility were a
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3 product of repeated exposure to gaslighting and broader emotional abuse. It is a question that can
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5 only be addressed via a longitudinal design but could fit with previous research demonstrating a
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7 broad negative impact on victims, as a result of what can be continuous abuse (Abramson, 2014;
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9 Bates, 2019; Gass & Nichols, 1988; Riggs & Bartholomaeus, 2018).

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12 In addition, accounting for context was clearly important. In the context of being a close
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14 friend, being a victim of gaslighting was predicted by experiences of emotional abuse as a victim
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16 *and* a perpetrator. The nature of this relationship requires further study, since it could be speculated
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18 that victims of gaslighting in other contexts (e.g. intimate partner, work colleagues) are directing
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20 this abuse to their close friends. Indeed, it appears that those who were being gaslighted by close
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22 friends were also perpetrating emotional abuse, which highlights the potential for unhealthy
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24 dynamics in certain relationships. It could be speculated that a close friendship is less open to a
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26 threat of loss or escalation of abuse; the latter may be relevant to intimate relationships and the
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28 former to loss of employment, if directed in a work setting. There certainly is something of interest
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30 emerging in relation to the context of the relationship under study. This is not a feature previously
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32 considered.

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38 Furthermore, overall trait aggression was only a predictor of gaslighting in relation work
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40 colleagues, which suggests context and thus the specific nature of the relationship is a factor that
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42 requires increased acknowledgement. Whilst the link between broader experiences of emotional
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44 abuse and gaslighting for intimate partners, close friends and work colleagues was clear, and in
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46 the direction predicted, overall trait aggression was appearing as a variable of interest only within
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48 the occupational domain. The importance of accounting for context was also acknowledged when
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50 trait aggression was examined using its four components (anger, hostility, verbal aggression and
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52 physical aggression). Although there was some variability, it appears increased trait anger and
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3 hostility feature as predicting variables for the victims of gaslighting, with this captured most in
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5 relation to intimate relationships and close friends. For work colleagues, increased anger featured
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7 for only one gaslighting factor (i.e. promoting self-doubt, confusion and blame). For gaslighting
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9 perpetration, trait aggression subscales did not feature as a predictor for those gaslighting their
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11 intimate partners and only to a limited extent towards work colleagues and restricted to one
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13 component of gaslighting.
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17 Overall, trait aggression linked to *emotion* seemed to have an association with being
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19 gaslighted, particularly where there was a degree of intimacy (e.g. close friend/intimate partner).
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21 Aggression was clearly not uniformly featuring in relation to gaslighting perpetration and, when it
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23 did, it was limited. Overall, it would appear there is not a strong argument for gaslighting to be
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25 considered associated with trait aggression aside from for victims, who are reporting higher levels
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27 of trait aggressive emotions (anger/hostility) but restricted to relationships where there is a degree
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29 of intimacy (partners/close friends).
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33 The current study is not without its limitations. The REA was unavoidably restricted by
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35 the limited literature available and a sizeable inclusion of case-studies as an evidence base. The
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37 measure developed was based on this and thus bespoke. However, it is presented as a preliminary
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39 checklist of behaviours, across context. Its association with emotional abuse more broadly
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41 provided some validity. Regardless, it remains a new measure and should be considered in
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43 development. Study two was further limited by its cross-sectional nature, where cause and effect
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45 of variables cannot be determined in the absence of longitudinal enquiry. In addition, over three
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47 quarters of the sample identified as women, thus limiting the generalisability to a male experience
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49 and negating any testing of sex differences, as a result. Sampling strategies focused on encouraging
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51 male participants is a direction future research should consider. This should also consider widening
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3 the age demographic, which appeared primarily limited to a younger adult group. Gathering the
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5 views of older age groups, coupled with the noted issue concerning sex, would assist with
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7 generalisability of these findings. Obtaining a more balanced proportion of participants between
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9 sex would also allow for consideration of the sex differences that could further capture whether
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11 the sex of perpetrators was an interacting factor.
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15 Future research could also capture the impacts of gaslighting on victims, by attending to
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17 mental health and negative impacts on self-esteem/self-view (e.g. Gass & Nichols, 1988). It could
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19 capture the issue of power dynamics, and explore the direction of these, since it cannot be assumed
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21 that those with perceived greater power would automatically be the perpetrator of gaslighting.
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23 Gaslighting may be more about the relationship itself and the degree of trust/belief a victim has
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25 and the willingness of a perpetrator to exploit this. This would begin to drive attention to other
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27 areas of potential interest, such as personality. Regardless, a core element to remain focused on is
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29 the under-researched aspect of this area of study and the importance of not making assumptions.
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31 The aggression literature, for example, has moved from presenting a dichotomous understanding
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33 of those involved in abuse, i.e. a perpetrator and a victim, to recognising instead that the role an
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35 individual adopts falls along a continuum of aggressor-victim, is dependent on context and, as
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37 argued here, is potentially informed by the specific nature and degree of intimacy in the
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39 relationship. Thus, focus in the REA on themes of the ‘gaslighter/gaslightee’ and
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41 ‘victim/perpetrator’ is a reflection of limited development in the gaslighting literature, based on
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43 limited evidence and/or case studies. It may not reflect reality; a gaslighter at home, for example,
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45 may be a gaslightee at work. Finally, building on context more broadly, the current study did not
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47 capture gaslighting at work beyond that engaged in at an individual level. Exploring more
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49 institutional and systemic gaslighting, including in relation to race and other factors of diversity,
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3 as noted in the REA, would seem not only useful but also essential as we seek to capture how the
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5 wider environment informs, facilitates and enables less than civil behaviour.
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8 **Practical implications**

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- 10 • Accounting for context in understanding gaslighting is key.
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- 12 • Developing and validating measures for gaslighting would assist with the evaluation of this
- 13 behaviour.
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- 15 • When working with those who have a history of emotional abuse, considering gaslighting
- 16 as a further element is potentially important.
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- 18 • It should not be assumed that gaslighting has an association with non-emotional
- 19 aggression; the type of relationship within which it is taking place is important.
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Table 1. Means and Standard Deviations across all measures

Total gaslighting	Overall	Men	Women
	(n = 386)	(n = 78)	(n = 298)
	M/SD	M/SD	M/SD
GBQ Victim	58.7/23.9	57.5/23.8	58.6/23.9
GBQ Perpetrator	47.2/23.1	49.9/22.8	46.2/23.0
Gaslighting across context	Intimate relationship	Close friend	Work colleagues
	(n = 386)	(n = 386)	(n = 386)
	M/SD	M/SD	M/SD
GBQ Victim	22.6/12.2	16.9/7.17	19.17/12.5
GBQ Perpetrator	17.0/10.9	14.8/7.2	16.8/12.2
	Overall	Men	Women
	(n = 386)	(n = 78)	(n = 298)
	M/SD	M/SD	M/SD
Aggression Questionnaire	67.0 (16.8)	69.4 (16.4)	66.2 (17.0)
MMEA (Emotional abuse) Perpetration	58.0 (21.4)	55.0 (16.7)	58.8 (22.5)
MMEA (Emotional abuse) Victimization	47.4 (11.8)	49.7 (12.8)	46.8 (11.5)

Table 2. Factor structure of the GBQ for victim items

GBQ Intimate partner victim items (GBQ item number)	Factor 1 (67.1 % variance)	Factor 2 (6.2% variance)
Factor 1 (Overall M = 15.9/s.d = 8.91; Women M = 16.4/s.d = 9.1; Men M = 13.4/s.d. = 7.7)	Loadings	Loadings
Factor 2 (Overall M = 6.7/s.d. = 3.81; Women M = 6.83/s.d. = 3.88; Men M = 6.1/s.d. = 3.39)	<i>Promoting self-doubt, confusion and blame</i>	<i>Altering recollection of behaviour</i>
When I have stated I do not feel respected by them, they have told me that no one else would put up with me and made me feel like I am the problem (11)	.80	
When inquiring if they completed a task, which I asked them to do, they have said that they do not remember me asking and made me question my memory (13)	.784	
When I do not do something that they asked me to do, they have said that I always behave this way and make me feel as though this was a pattern of behaviour when it is not (17)	.782	
When I discuss problems, they have told me that I am complaining and should simply try harder, making me feel confused (15)	.70	
They have told me that I should not behave in a certain way as it is 'not like me' thus making me question my identity (19)	.68	
When I have brought up the problem, they have told me that I am imagining the issue and there is nothing to worry about, making me feel I am too sensitive (9)	.61	
When I question their lies, they have acted hurt and made me feel bad for challenging them (7)	.60	
They have insisted that I have done something I have not and made me doubt my recollection (3).		.87
They have told me something has not happened when it has, and made me doubt my memory of the event (1).		.83
During an argument, they have told me that everyone agrees with them and made me feel like my perspective is incorrect. I am alone in feeling this way (5).		.69

Table 2 continues

GBQ Close friend victim items (GBQ item number)	Factor 1 (23.5% variance)	Factor 2 (3.44% variance)
Factor 1 (Overall M = 11.7/s.d = 5.69; Women M = 11.8/s.d = 5.9; Men = 11.7/s.d. 4.9)	Loadings	Loadings
Factor 2 (Overall M = 5.11/s.d. = 2.26; Women M = 4.96/s.d = 2.19; Men = 5.6/s.d. = 2.49)	<i>Promoting self-doubt, confusion and blame</i>	<i>Altering recollection of behaviour</i>
When I do not do something that they asked me to do, they have said that I always behave this way and make me feel as though this was a pattern of behaviour when it is not (17).	.799	
When I discuss problems, they have told me that I am complaining and should simply try harder, making me feel confused (15).	.73	
When I have stated I do not feel respected by them, they have told me that no one else would put up with me and made me feel like I am the problem (11).	.72	
They have told me that I should not behave in a certain way as it is 'not like me' thus making me question my identity (19)	.71	
When inquiring if they completed a task, which I asked them to do, they have said that they do not remember me asking and made me question my memory (13)	.708	
When I have brought up the problem, they have told me that I am imagining the issue and there is nothing to worry about, making me feel I am too sensitive (9).	.55	
When I question their lies, they have acted hurt and made me feel bad for challenging them (7).	.51	
They have told me something has not happened when it has, and made me doubt my memory of the event (1).		.85
They have insisted that I have done something I have not and made me doubt my recollection (3).		.81
During an argument, they have told me that everyone agrees with them and made me feel like my perspective is incorrect. I am alone in feeling this way (5).		.65

Table 2 continues

GBQ Work colleagues victim items (GBQ item number) Factor 1 (Overall M = 13.5/s.d = 9.44; Women M = 13.3/s.d = 9.2; Men = 14.2/s.d. 9.55) Factor 2 (Overall M = 5.64/s.d. = 3.69; Women M = 5.4/s.d = 3.5; Men = 6.5/s.d. = 3.91)	Factor 1 (68.9 % variance) Loadings	Factor 2 (8.3% variance) Loadings
They have told me that I should not behave in a certain way as it is 'not like me' thus making me question my identity (19)	.84	
When I have stated I do not feel respected by them, they have told me that no one else would put up with me and made me feel like I am the problem (11)	.83	
When I do not do something that they asked me to do, they have said that I always behave this way and make me feel as though this was a pattern of behaviour when it is not (17)	.78	
When inquiring if they completed a task, which I asked them to do, they have said that they do not remember me asking and made me question my memory (13)	.777	
When I discuss problems, they have told me that I am complaining and should simply try harder, making me feel confused (15)	.772	
When I have brought up the problem, they have told me that I am imagining the issue and there is nothing to worry about, making me feel I am too sensitive (9)	.770	
When I question their lies, they have acted hurt and made me feel bad for challenging them (7)	.62	
They have told me something has not happened when it has, and made me doubt my memory of the event (1).		.87
They have insisted that I have done something I have not and made me doubt my recollection (3).		.82
During an argument, they have told me that everyone agrees with them and made me feel like my perspective is incorrect. I am alone in feeling this way (5).		.78

Table 3. Factor structure of the GBQ for perpetrator items

GBQ Intimate partner perpetrator items (GBQ item number)	Factor 1 (68.8 % variance) Loadings	Factor 2 (6.4% variance) Loadings
Factor 1 (Overall M = 11.6/s.d = 7.6; Women M = 11.4/s.d = 7.7; Men = 11.7/s.d. 6.7)		
Factor 2 (Overall M = 5.49/s.d. = 3.8; Women M = 5.5/s.d = 3.9; Men = 5.5/s.d. = 3.4)	<i>Encouraging confusion over recollection and self- identity</i>	<i>Manipulation of emotions and encouraging self-blame</i>
I have insisted that they have done something that they have not done to make them doubt their recollection (4)	.82	
I have told them something has not happened when it has, to make them doubt their memory of the event (2)	.81	
During an argument, I have told them that everyone agrees with me to make them feel like their perspective is incorrect and that they are alone in feeling this way (6)	.80	
I have told them that they should not behave in a certain way as it is “not like them” thus making them question their identity (20)	.76	
When they do not do something that I asked them to do, I have said that they always behave this way to make them feel like this was a pattern of behaviour when it is not (18)	.724	
When they discuss problems with me, I have told them that they are complaining and should try harder. I do this to make them feel confused (16)	.720	
When they ask me if I completed a task, which they asked me to do, I have said that I do not remember them asking me, to try and make them question their memory (14)	.60	
When they question my lies, I have acted hurt to make them feel bad for challenging me (8)		.86
When they have stated that they do not feel respected by me, I have told them that no one else would put up with them and made them feel like they are the problem (12)		.79
When they brought up a problem, I have told them that they are imagining the issue and there is nothing to worry about, making them feel like they are too sensitive (10)		.66

Table 3 continues

GBQ Close friend perpetrator items (GBQ item number)	Factor 1 (47.0% variance)	Factor 2 (28.2% variance)
Factor 1 (Overall M = 9.1/s.d = 5.1; Women M = 9.0/s.d = 5.3; Men = 9.4/s.d. 4.0)	Loadings	Loadings
Factor 2 (Overall M = 4.2/s.d. = 2.13; Women M = 4.0/s.d = 2.1; Men = 4.8/s.d. = 2.2)	<i>Promoting self-doubt, confusion and blame</i>	<i>Altering recollection of behaviour and self-identify</i>
When they have stated that they do not feel respected by me, I have told them that no one else would put up with them and made them feel like they are the problem (12)	.84	
When they ask me if I completed a task, which they asked me to do, I have said that I do not remember them asking me, to try and make them question their memory (14)	.73	
When they question my lies, I have acted hurt to make them feel bad for challenging me (8)	.70	
When they do not do something that I asked them to do, I have said that they always behave this way to make them feel like this was a pattern of behaviour when it is not (18)	.65	
When they discuss problems with me, I have told them that they are complaining and should try harder. I do this to make them feel confused (16)	.64	
When they brought up a problem, I have told them that they are imagining the issue and there is nothing to worry about, making them feel like they are too sensitive (10)	.59	
I have told them something has not happened when it has, to make them doubt their memory of the event (2)		.83
I have insisted that they have done something that they have not done to make them doubt their recollection (4)		.81
I have told them that they should not behave in a certain way as it is “not like them” thus making them question their identity (20)		.62

Table 3 continues

GBQ Work colleagues perpetrator items (GBQ item number)	Factor 1	Factor 2
	(70.9 % variance)	(7.9% variance)
	Loadings	Loadings
Factor 1 (Overall M = 12.1/s.d = 9.2; Women M = 11.7/s.d = 8.8; Men = 13.2/s.d. 9.6)		
Factor 2 (Overall M = 4.7/s.d. = 3.5; Women M = 4.4/s.d = 3.4; Men = 5.2/s.d. = 3.6)	<i>Promoting self-doubt, confusion and blame</i>	<i>Altering recollection of behaviour</i>
When they have stated that they do not feel respected by me, I have told them that no one else would put up with them and made them feel like they are the problem (12)	.86	
When they question my lies, I have acted hurt to make them feel bad for challenging me (8)	.778	
When they brought up a problem, I have told them that they are imagining the issue and there is nothing to worry about, making them feel like they are too sensitive (10)	.772	
When they discuss problems with me, I have told them that they are complaining and should try harder. I do this to make them feel confused (16)	.75	
When they do not do something that I asked them to do, I have said that they always behave this way to make them feel like this was a pattern of behaviour when it is not (18)	.748	
I have told them that they should not behave in a certain way as it is “not like them” thus making them question their identity (20)	.737	
When they ask me if I completed a task, which they asked me to do, I have said that I do not remember them asking me, to try and make them question their memory (14)	.65	
I have told them something has not happened when it has, to make them doubt their memory of the event (2)		.89
I have insisted that they have done something that they have not done to make them doubt their recollection (4)		.88
During an argument, I have told them that everyone agrees with me to make them feel like their perspective is incorrect and that they are alone in feeling this way (6)		.78

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