Northumbria Research Link

The positive aspects of fire use: the experiences of non-criminalised fire users

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Abstract

Purpose: Psychological research on fire has focussed primarily on its misuse in the form of arson and firesetting, which reflects a tradition in forensic psychology for focussing on risk and pathological behaviour. However, this is inconsistent with the strengths-based approach because it fails to account for positive aspects of fire and law-abiding/ healthy interactions with fire. This study is the first to explore the psychology of non-criminalised forms of fire use, predicated on the continuum of fire use (CoFU; Horsley, 2020, 2021) conceptualisation. The research question was 'what psychological mechanisms underpin non-criminalised fire users' experience of fire'? **Methodology:** Semi-structured interviews were conducted with 12 adults who use fire in law-abiding forms. Data was analysed using abbreviated Grounded Theory. Steps were taken to ensure reliability and validity, including a Cohen's Kappa calculation, which indicated an agreement level of .8 between two raters. **Findings:** Four core themes were identified relating to the benefits of fire on psychological wellbeing, namely: 1) Immediate Gratification; 2) Hope and Empowerment; 3) Self-Concept, and; 4) Emotional Security. **Originality and practical application:** This is the first psychological research study exploring the positive aspects of fire use, underpinned by the CoFU. The findings can inform rehabilitative approaches to arson and also, more importantly, early intervention programmes by supporting young people in developing healthy relationships with fire.

Key words: Firesetting; arson; positive psychology; forensic psychology; qualitative; grounded theory.

Arson and Firesetting

Practically all psychological literature on fire concerns its *mis*use, namely in the form of arson or firesetting. Arson is a legal term, defined by section 1 (3) of the criminal damage act, as any deliberate damage to property caused by fire (Daykin and Hamilton, 2011). Firesetting describes any deliberate act, which is "not recreational in nature" (Gannon and Barrowcliffe, 2012; p. 2). Horsley (2020, 2021, in press) applies a broader term – fire use – which encompasses all human-fire interactions. This can be further sub-divided into *non-criminalised* fire use, i.e. that which is law-abiding and is considered socially acceptable, such as the lighting of candles and campfires, and *criminalised* use, i.e. arson and firesetting. Within this paper, the term firesetting will be used when discussing existing literature and fire *use* will be applied in reference to the current study and Horsley's work.

The literature base on firesetting has grown over the past decade (for examples see Gannon *et al*., 2013; Ó Ciardha *et al*., 2015; Bell *et al*., 2018). This has been valuable in shaping a contemporary theoretical understanding of firesetting, such as the Multi-Trajectory Theory of Adult Firesetting (M-TTAF; Gannon *et al*., 2012a). The M-TTAF comprises two tiers; the first of which relates to the aetiology of firesetting, including consideration of biological and cognitive factors. The second tier contains five prototypical trajectories, based on patterns of characteristics leading to firesetting (see Gannon et al., 2013, p. 28). The M-TTAF has been highly influential, for instance, it forms the basis of novel treatment, namely, the Firesetter Intervention Programme for Prisoners (FIPP - Gannon, 2012., as cited in Tyler *et al.,* 2018) and a version for mentally disordered offenders (FIP-MO - Gannon and Lockerbie, 2011; as cited in Tyler *et al*., 2018). Despite its contribution to the field, the M-TTAF is a theoretical perspective on fire*setting* and, thus, does not address fire *use* more broadly.

The overwhelming focus on fire*setting* is not surprising given a long tradition in forensic psychology for an emphasis on risk, risk factors and pathological behaviour (Rogers,

2000). Horsley (2020, 2021, in press) asserts that the literature base could now be enhanced by aligning the study of fire and fire use with the contemporary ethos in forensic psychology – the strengths-based approach – which is underpinned by the principles of positive psychology (for a review see Seligman and Csikszentmihalyi, 2000) and protective factors (for example see Ward, 2017). Protective factors are thought to mitigate a person's risk of committing crime and to support desistance from crime. They are, therefore, considered to be a person's 'strengths'. This strengths-based ethos is the basis of a framework, which has proved influential in offender rehabilitation – the Good Lives Model (GLM; Ward and Brown, 2004). The GLM proposes that all humans are motivated to meet a set of "primary human goods" (Ward and Brown, 2004, p. 246), i.e. life goals. The GLM posits that those who commit crime have a tendency to pursue their goals maladaptively. The model, and the rehabilitative interventions drawing upon it such as the FIPP (Gannon, 2012., as cited in Tyler *et al.,* 2018) and FIP-MO (Gannon and Lockerbie, 2011; as cited in Tyler *et al*., 2018), promote supporting those who have committed crime to pursue goals in a more adaptive and pro-social manner.

In applying the strengths-based philosophy to fire use, Horsley (2020, 2021, in press) argues that in addition to identifying what is 'wrong' with fire-related behaviour with a view to 'correcting' it or promoting avoidance of fire altogether, clinicians should be striving to identify and build on the positives of fire. There are a myriad of positives associated with fire (see below) and, in turn, many examples of healthy and non-criminalised interactions with it. As such, Horsley argues for a reconceptualisation of fire use, which means a move away from a sole focus on pathological forms of behaviour. Horsley proposes a dimensional perspective on fire use – the continuum of fire use (CoFU). At one pole of the CoFU sits *criminalised* fire use. At the other end sits *non-criminalised* fire use. According to the CoFU, there are different degrees of non-criminalised and criminalised fire use, which sit along the continuum. Horsley

asserts there is a need to study the CoFU in its entirety, rather than solely the criminalised pole. This demands an appreciation of the positive aspects of fire.

Positive Aspects of Fire and Fire Use

Humans share a long and complicated relationship with fire, at the heart of which is our reliance on the sun; the lifeblood of our solar system and, thus, our very existence (Horsley, in press). Charles Darwin (1871) considered anthropogenic fire use[1] to be "the greatest [discovery], excepting language, ever made by man" (cited in Wrangham, 2010, p. 10). Our species came to use fire millions of years ago because it served a variety of functions, including the cooking of food, which, itself, offered many advantages (Wrangham and Carmody, 2010; Wrangham, 2010). Additionally, fire provided our ancestors with heat and light, which, in turn, warded off predators (Clarke and Harris, 1985;), as well as aiding tool production (Fessler, 2006).

Fire continues to play a crucial role in our survival and psyche today, for example, around 80% of the world's energy is still gleaned through the burning of fossil fuels (Nunez, 2019). It also carries great social, psychological and symbolic significance, albeit with vast cultural variation (Fessler, 2006) and, thus, permeates many aspects of human life. For example, fire plays an integral role in religious worship (Winder, 2009) and is used in ceremonies, celebrations and for entertainment (Presdee, 2005). Additionally, Goudsblom (1992) notes that fire has always been ubiquitous in group life because of the comfort and security it offers. Hardesty and Gayton (2002) discuss how it is conveyed as "stimulating, provocative, positive and powerful" in films, music, and literature (pp. 1 – 2) and Pinsonneault

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[1] **Anthropogenic fire use:** the use of fire by humans.

(2002) demonstrates its role in the English language by citing phrases such as "seeing red" and "walking on hot coals" (p. 27).

Despite fire's significance both past and present, we know very little about the psychology underpinning its use, from a non-criminalised perspective. This is an important gap in the existing literature because learning more about 'healthy' fire use could inform firesetting treatment (Horsley, 2020, in press). Furthermore, Horsley argues it should be the blueprint for community-based early-intervention programmes. This was the premise of the current study.

Rationale and Aims

Drawing on the broad ethos of the strengths-based approach and predicated on the CoFU conceptualisation, the study aimed to explore non-criminalised forms of fire use. The research question was: what psychological mechanisms underpin non-criminalised fire users' experience of fire? Horsley (2020, in press) asserts that fire is a social phenomenon; such phenomena "cannot be reduced to isolated variables" (Yilmaz, 2013; pp. 311 – 312) and, thus, a qualitative approach was most appropriate. The Grounded Theory method (Glaser and Strauss, 1967) was employed because the overarching objective was to understand non-criminalised fire use from a psychological perspective in order to contribute to a preliminary theory based on the continuum conceptualisation. As discussed above, all of the existing theories relate to firesetting and arson (i.e. *criminalised* fire use), whereas the current study addressed *non*-criminalised forms of use. More specifically, an abbreviated version of Grounded Theory, informed by the constructivist approach (Charmaz, 1990), guided data collection and analysis. This adaptation encourages the researcher to play an active role through *interacting* with the data (Charmaz, 2000). The abbreviated form was used because this study represents only the first stage of data collection, i.e. one sample.

Method

 Participants.

 The sample comprised 12 adults with extensive (i.e. regular and on an at least once-weekly basis) experience of fire use, all of whom were assigned a pseudonym. Experiences included lighting coal fires and candles in the home, attending organised bonfires, using camp-fires, fire performing, participating in fire walks and religious and spiritual uses of fire. Whilst the focus of this study was non-criminalised forms of fire use some participants also shared experiences which could be considered as sitting closer to the criminalised end of the continuum, ranging from melting toys over candles to throwing aerosols into fires. This diversity is entirely consistent with the continuum conceptualisation in that, in reality, a person's lifetime fire use might span the CoFU or, at least, a proportion of it (Horsley, 2020, in press). No participants had fire-related criminal convictions. The sample comprised eight people identifying as women and four as men. The uneven gender split reflects who was willing to take part in the study and is addressed below as a potential limitation. The participant age range was 22 to 66 years with an average age of 45. All participants were residing in the UK at the time of interview.

 Measures.

 An indicative Semi-Structured Interview (SSI) schedule was devised in line with the research question and based on guidance from Charmaz (2014). Questions related to participants' psychological experience of fire use in childhood and adulthood through exploring thoughts, memories, emotions and physiological sensations. Questions included: 'how do you feel when you are around fire' and 'what childhood memories do you have of fire'?

Procedure.

Appropriate ethical approval for the study was granted. Guidance from Robinson (2014) was followed to determine the nature of the desired sample. Purposive sampling was employed to identify participants with experiences of fire use in four categories. These categories were arrived at through a review of the literature to identify common uses of fire, namely: (a) entertainment; (b) religious/ spiritual use; (c) home use, and; (d) using fire outdoors. Two methods were utilised to recruit participants. Firstly, email contact was made with relevant organisations, such as fire performing and fire walking companies. Recipients were invited to take part and to disseminate the information to others. Secondly, the snowball technique (referred to by Hood, 2007) was used by asking participants post-interview if they knew of others who might be interested in taking part. All willing participants reviewed written information about the study before consenting.

One to one interviews were conducted with each participant, eight via Skype and four in person according to participants' preference. Interviews ranged in length from 54 to 156 minutes, with an average of just under 84 minutes. Interviews were audio-recorded. Data collection ceased when theoretical saturation was reached as recommended by Birks and Mills (2015). By interview 12 repetitious themes, such as the sensory aspects of fire, were emerging.

Data Analysis and Quality Assurance.

Transcription and data analysis were both done by hand, following a systematic process specific to Grounded Theory using guidance from Willig (2013). Data analysis was first undertaken on a transcript-by-transcript basis and, later, across all transcripts. Descriptive codes were assigned to each line of the transcript, which were then sorted into descriptive categories. Descriptive categories were arranged into higher-order analytical categories and

lastly into themes and sub-themes for each participant. Lastly, axial coding was undertaken where data was sorted into core themes and sub-themes across all 12 participants.

Steps were taken to ensure reliability and validity of data collection and analysis. Firstly, an *audit trail* was used to systematically record the process of data collection and analysis (Schwandt, 2001). *Constant comparison* was applied to identify similarities and differences between emerging categories at each stage of data analysis (Willig, 2013). In addition, the researcher engaged in *reflexivity* through memo-writing (Willig, 2013). *Negative case analysis* was also employed to scrutinise inconsistencies in the data (McPherson and Thorne, 2006).

To increase reliability of the coding process, a second rater (a research assistant with experience of qualitative methods), who had no previous knowledge of the study, screened a sample of the data. The second rater was presented with descriptive codes from over 25% of the data (this equated to three full transcripts, with an additional one used as a safeguard), along with definitions of each theme and sub-theme. Using a code book, the second rater was asked to independently decide on which theme and sub-theme each descriptive code should be assigned to. Agreement between the two raters was calculated using Cohen's Kappa (1960). Initially, the Kappa Measure of Agreement value was .7 (p <.000), which is considered to be good (Peat, 2001, p. 228; cited in Pallant, 2020). The researcher and second rater then engaged in a process of "negotiated agreement" (Campbell *et al*., 2013, p. 306), whereby discrepancies in themes and sub-themes were explored. For some descriptive codes, this resulted in a consensus being reached but for others the discrepancies in judgement remained and the primary researcher's coding prevailed. The final Kappa Measure of Agreement value was .8 (p <.000), which is considered very good (Peat, 2001, p. 228; cited in Pallant, 2020).

Results

Four core and interconnected themes were identified in the data, namely: (1) *Immediate Gratification*, (2) *Inspiration*, (3) *Self-Concept*, and (4) *Emotional Security*, each of which has two sub-themes. They highlight the psychological mechanisms underpinning non-criminalised fire use and, more specifically, the *psychological benefits* it offers. Findings are reviewed below, in accordance with each theme.

**1.	Immediate Gratification.**

Participants spoke of the immediate, transient benefits of fire use, occurring each time they interacted with fire. Two sub-themes were identified, as described below.

Medicinal.

This sub-theme relates to the immediate therapeutic value of fire for participants, through its proximal impact on physiological and emotional state. Fire was described as a *stimulant* by many participants, as exemplified by Kimmy: *"I'll often put a candle on because it's that spark that seems to ignite the energy again"* and Amanda who described it as a *"pick me up"*. Participants also spoke of fire's sedative effects: *"it's really comfortable and homely and warm and nice"* (Alice) and some participants even made reference to the notion of fire making them feel *"sleepy"* (Laura). Fire has also helped to distract participants from their worries, thus, improving their mood in the short-term. For example, Harry noted the *"flow state"* entered in to while fire performing, which was echoed by Laura who likened fire performing to *"an active meditation"*. Similarly, Elle said her *"mind goes free"* when lighting candles.

In addition to prompting physiological changes, fire use has also proved cathartic by facilitating a transient shift in identity. This is captured in the next sub-theme – *Becoming Someone Else.*

Becoming Someone Else*.*

Fire has a subjective impact on participants' perceived character, and personality. Whilst engaging with fire, participants noted a *subjective and transient* change from the real them (often a person lacking in confidence) to someone who is powerful, in control and admired. This was exemplified by Alice, who described fire-walks she has engaged in:*"it made me feel a lot stronger about me. I was somebody; I was a really, really strong and powerful person"*. This personal transformation was echoed by Harry who described himself as *"an absolute rock star"* when fire performing.

The Immediate Gratification theme relates to transitory benefits, which are reinforcing and, thus, have served to perpetuate participants' fire use over many years. The remaining three themes depict longer-term benefits, the first of which is *Inspiration*.

2.   Inspiration.

This theme concerns the motivating qualities of fire. Participants conveyed a desire to be the best that they can be, as portrayed by George: *"that's kind of like a spiritual goal really; to make yourself the best you can be"*. Fire has aided them in their quest for self-fulfilment in two ways, corresponding to two sub-themes described below.

Role Model.

Participants spoke of fire as being something to look up to, admire and even to idolise, much in the way that we would a human role-model. For example, Elle said: *"the fire is there to teach you everything you need to know. So the fire becomes a bit of a master; you will see the fire as your, kind of, guru"*. The admiration which participants have for fire was epitomised through the respect they hold for it, including its dangers:

Don't go near fire; it'll get you, it can catch you, it can jump on your clothes, it can jump from thing to thing. All our narratives about fire is about something that's alive. It's not just a process that's occurring, it's a live thing and you need to be careful of it (Connor).

Other participants noted a respect for fire on a spiritual and symbolic level:

Lighting the gas hob should be done with some sort of gratitude and thanks, because we've been given the gift of learning how to create fire. But even just lighting an ordinary candle in the evenings - a nice little fragrant scent - it's always, you say, 'an honour to the universe' (Kimmy).

The symbolic significance of fire is also of relevance to the second sub-theme - *Hope and Empowerment*.

Hope and Empowerment.

This sub-theme relates to the positivity, optimism and energy which fire embodies. Participants spoke of fire as the embodiment of hope, as conveyed by George, who is a Pagan: *"at the heart of that festival for us is a log, and a bright burning fire so that at the darkest part of the year, there's hope"*. Similarly, Kimmy alluded to 'new beginnings' when speaking of the agricultural practice of burning heather moors to control foliage: *"you have to get rid of the dead parts in order for new life to come. If we're heating something off, we get rid of the negative"*. Not only does fire represent hope for participants, some discussed its enabling, and empowering qualities. For example, when speaking of her role as a fire entertainer Elle said: *"it has opened different worlds to me because I got in to festivals and art"*.

Through inspiring participants to be 'the best', fire can have a positive impact on their identity and how they feel about themselves on a longer-term basis. This relates to the next theme, *Self-Concept (SC)*.

3.   Self-Concept.

Self-Concept is concerned with participants' sense of self and has two interlinking components, which form the sub-themes – *Identity* and *Self-Esteem.*

Identity.

This pertains to how fire has contributed to participants' understanding of who they are, in terms of their heritage, purpose in life, and social standing. It is different to the aforementioned Becoming Someone Else sub-theme because this pertains to a transient shift, whereas Identity is a longer-term construct. Some participants, such as George, described it as an important root of our species' existence: "*[fire] underpins so much of who we are, and what we do, and our history, and our culture, in ways that we haven't even scratched the surface of*". Some also acknowledged the role fire has played in their own life specifically, as exemplified by Mary who indicates she has been 'trained' to manage a campfire from start to finish: "*I bring a shovel, and lift the sod. I take the grass off. So we leave it as we found it, you know. That is my training*".

Fire use has also contributed to identity through providing a sense of *belonging* for participants, thus establishing their social status. Jane spoke of the social aspect of communal fires and how it has helped her to relate to like-minded people: "*[we] burn stuff on the fire, have barbeques, and do our fire toys. I guess I'd met my fire kindred spirits. Everyone I know likes setting stuff on fire. Everyone likes a good fire*". Similarly, Daisy spoke of bonding with

her father over fire: *"[fire] was something my dad enjoyed; I suppose it was something we both enjoyed"*.

Fire's role in participants' identity forms part of their self-concept. Another aspect is Self-Esteem.

Self-Esteem.

Whereas Identity concerns how a person defines themselves, the Self-Esteem sub-theme relates to how they feel about who they are. Fire enhances self-esteem through attracting external recognition and validation from others. For example, Laura reflected on being a fire performer: *"it's a good way of getting [the audience's] attention"*. Participants have also gained intrinsic reinforcement through acknowledging instances where they 'did a good job' with respect to fire use. For Amanda, the ability to maintain a fire is an important benchmark against which she judges herself: *"I do rate myself on making a good fire. That's the bit I enjoy, of almost feeling I've done a proper fire. So, feeling a sense of pride"*. Harry even referred to an interaction between external and internal factors influencing self-esteem: *"there was definitely an element of boosting my self-esteem by, one: being very good, and two: being seen to be very good"*.

Having a healthy self-concept can improve one's sense of emotional security, which is the last theme.

4.   **Emotional Security.**

Emotional Security refers to a permanent state in which the person is at ease, comfortable, and feels safe. In this study it represents the ultimate in psychological wellbeing. This theme comprises two sub-themes, which are reviewed below.

Authenticity.

This represents the simple, genuine and unthreatening nature of fire. Fire's dangers were also referred to but for participants in this study they were superseded by its positive qualities. Fire's simplicity contributes to a sense of emotional security because it puts participants at ease, for example:

Everything's just so nice by candle light. It's just a really warm, friendly glow. My childhood was quite austere really. There wasn't that much fun to go round, and [lighting candles] was nice, cheap fun. It was just really nice to have the candle light, and just be like 'oh, what a lovely treat, look at the lovely light' (Jane).

For some participants the simplicity of fire has enabled them to connect with nature, making them feel grounded, 'at one', and secure: *"[fire] just feels all quite natural; it's going back to the natural elements"* (Amanda).

There was a sense from participants that the stress of daily living, the unpredictability of life, and our reliance on technology unnerves them and that fire has provided an antidote to this. Some participants compared the authenticity of fire with synthetic sources of heat and light. For example, Jim compared 'real' fire to man-made alternatives: *"[real fire is] much more attractive than sterile heat; I would find it more sterile if you just put radiators or a convector heater on, or indeed if it's an electric one with that flame effect"*.

For participants, part of fire's authenticity is its constancy and predictability in that it has always existed throughout history and will always continue to exist, as explained by George:

There's a sense of continuity with fires; the notion of continuity, of life, and of the home. So the common focal point of the fire is the same as the focal point of the fire when a family were living in this house 300 years ago. So that's kind of important, so there's a continuity of human experience that the fire brings out.

In addition to its authenticity fire's reassuring nature has also contributed to participants' emotional security, which is the second sub-theme.

Reassurance.

For participants, fire is comforting, which, in turn, offers reassurance. For Mary it has provided company: "*it's one of the comforts I have when I'm in the house by myself. In a way that central heating wouldn't give it to me; I do think there's life in [fire] and company in it*". Other participants referred to fire's caring and nurturing qualities: "*the fire comes to hug you and the fire brings flowers and everything else. It's just a unique thing. You feel a lot of love*" (Elle). Interestingly, Jane used very similar language when describing fire: "*it's like a little hug experience*".

In addition to companionship and nurturance, fire is viewed as protective:

You can see what's near the fire and you can't see what's away from it. So away from the fire is where the potential danger lurks and near the fire - in the light and warmth and security of other people – that's where the safety is (Connor).

Whereas nurturance, and protection appeared as separate concepts in most participants' narratives, George conflated the two, indicating that nurturance *enables* a sense of safety:

"[Fire] is about nurturance and warmth and protection. So it's at the heart of what keeps you safe and what keeps you alive in a way that most modern people probably don't realise or see".

The Reassurance sub-theme is concerned with a two-way *interaction* between the participant and the fire. For example, a *"hug"*, requires the participation of both parties. It is this interaction, which contributes to fire's reassuring nature and, thus, emotional security.

The Psychology of Fire Use

A theoretical framework was constructed in order to demonstrate that the themes discussed above are process-orientated and to depict the linkages between them (see figure one). The immediately gratifying effects of fire use are positively reinforcing and, thus, this prompts repeated fire use, which is represented by the cyclical process appearing to the left of the figure. Repeated fire use provides inspiration for participants as well as impacting positively on their self-concept. Lastly, repeated fire use impacts directly and positively on participants' sense of emotional security. Emotional security is also strengthened indirectly, via the self-concept theme, as depicted towards the right of the figure.

[Insert Figure one]

Discussion

The current study explored psychological mechanisms underpinning non-criminalised fire use. Four mechanisms (themes), all relating to the *benefits* of fire use, were identified from interviews with 12 participants.

The Immediate Gratification theme relates to the immediate and transient benefits of fire use on participants' emotional state. Fire has medicinal properties for participants, helping them to feel better in the short-term by acting on them physiologically. Physiological effects,

namely arousal, have already been associated with arson and firesetting (for examples see Fineman, 1995; Gannon *et al*., 2012a) and with a specific psychiatric diagnosis – pyromania – (APA, 2013) but there has been less written about its relaxing potential, particularly from a non-criminalised perspective, albeit it is referred to by Gannon *et al*., (2012a). This reinforces Horsley's argument that, by and large, only the negatives associated with fire have been explored to date.

According to the current data, fire's arousing and relaxing properties are profoundly cathartic and help to focus one's attention. There are parallels here with one of the principles of positive psychology known as "flow", which is defined as "the holistic sensation present when we act with total involvement" (Csikszentmihalyi, 2014; p. 136) and, in turn, this arguably relates to the Inner Peace primary human good within the GLM (Ward and Brown, 2004). This sub-theme highlights the value of the positive physiological effects of fire, which, it is proposed, should be considered in the design of early-intervention programmes.

The Immediate Gratification theme also indicates that fire offers a form of escapism through temporarily enabling participants to transform into their 'ideal' self. Psychological literature on the self is of relevance here. It has long been suggested that there are three domains to the self: (a) the ideal self, (b) the actual self, and (c) the ought self (Higgins, 1987). Through engaging with non-criminalised forms of fire use participants have temporarily aligned these domains which Higgins notes is important for contentment. This highlights another benefit of *healthy* fire use, which should be acknowledged in early intervention programmes with young people.

The second theme – Inspiration – relates to fire's role in self-improvement and optimism. This is reminiscent of the Spirituality primary human good within the GLM which is concerned with finding a meaning in one's life. For some participants fire has even acted as a form of role-model. Having a *human* role-model in life is psychologically beneficial (for

examples see Lockwood *et al.,* 2002; Walters, 2016), but little is known about the impact of non-human entities, such as fire in this case. Interestingly, all participants personified fire in their narratives, thus enabling them to 'bring it to life', which could explain how it serves as an effective role-model. Participants also spoke of fire as embodying hope as has been highlighted previously by Winder (2009). More broadly, much has been written about hope within the positive psychology literature (for examples see Bruininks and Howington, 2019; Chamodraka *et al.,* 2017), and its beneficial effects (Seligman and Csikszentmihalyi, 2000). These findings, concerned with the inspirational qualities of fire, can inform forensic practice. More specifically, in order to support young people in forming a healthy relationship with fire they should be educated on the positive symbolism associated with it, rather than the negatives and fire's destructive nature being the sole focus.

The third theme – Self-Concept – comprises two sub-themes, Identity and Self-Esteem. Burke and Stets (2009) and Stets and Burke (2014) discuss different types of identity, including *role*, relating to one's perceived social position, and *social/ group*, concerned with how one relates to others. These ideas can be applied to the current data. In terms of role identity, fire has an important function in participants' lives, and has, thus, provided them with a sense of purpose. This sense of purpose (sometimes referred to as 'agency' in the positive psychology literature; for example see Shorey *et al.*, 2007) in turn, relates to life satisfaction and health (McKnight and Kashdan, 2009), life expectancy (McKnight and Kashdan, 2009; Hill and Turiano, 2014) and psychological wellbeing (Ryff and Singer, 2008). Just as fire aligns with the role identity (Burkes and Stets, 2009; Stets and Burke, 2014), so too it relates to the social/ group identity according to the current findings (Burkes and Stets, 2009; Stets and Burke, 2014). More specifically, fire provides participants with a sense of belonging. This is a concept associated with happiness and health (Newman *et al.,* 2007), which aligns well with the GLM primary human good entitled Relatedness (Ward and Brown, 2004, p. 246)

Self-Esteem is another facet of the Self-Concept theme. The current findings indicate that fire use boosts participants' self-esteem, which positively impacts psychological wellbeing. This is consistent with research indicating that *low* self-esteem has been linked to depression (Orth *et al.,* 2009; Sowislow and Orth, 2013), anxiety (Sowislow and Orth, 2013), and even physical health issues (Trzesniewski *et al.,* 2006). For participants in this study, fire use can improve self-esteem through 'doing a good job', either subjectively or through receiving praise from others. In other words, participants perceive themselves to have gained some degree of mastery over fire. Mastery has been found to relate to psychological wellbeing (Ryff and Singer, 2008) and features in the GLM (Ward and Brown, 2004, p. 246).

From a rehabilitative perspective, the Self-Concept theme supports existing approaches. For example, in the FIPP, group members are repeatedly encouraged to generate positive self-statements (T.A. Gannon, personal communication, February 5, 2021), highlighting the relevance of self-esteem as a treatment target. Horsley (2020, in press) asserts that it could play more of a role in early interventions but there is a fine balance to strike, particularly in terms of the Identity sub-theme. Identifying too closely with fire could be problematic (see Ó Ciardha *et al*., 2015), which highlights the importance of supporting young people to develop other *non*-fire-related aspects of their sense of self. However, if they are able to develop a healthy relationship with fire early in life then young people could come to identify with *non*-criminalised forms of fire use, rather than seeking out criminalised forms of the behaviour. This, in turn, could actually prove to be protective. The point being made here is that identifying with fire per se may not necessarily be problematic if young people can be supported to do so in an adaptive way.

Lastly, the Emotional Security theme in the current study is conceptualised as being the highest echelon in psychological wellbeing and is a relatively stable way of being for participants. This is strongly reminiscent of the concept of self-actualisation, as proposed by

Maslow (1943). According to the data, fire's authenticity and reassuring nature contributes to participants' wellbeing. Horsley (2020, in press) argues that this, at least in part, may have its roots in fire's role in evolution (see Wrangham, 2010; Fessler, 2006; Clarke and Harris, 1985). The capacity for fire to contribute to wellbeing is important in considering early-intervention. In highlights the potential to educate young people about its authentic and comforting qualities. This is in stark contrast to a sole focus on teachings about fire's dangerous and destructive nature, which Horsley argues might only serve to increase the level of intrigue and excitement, thus making criminalised fire use more appealing for some young people.

Implications for Theory and Practice

This study has revealed psychological benefits of non-criminalised fire use which has real world application in forensic psychology. The preliminary theory presented makes a novel contribution because it is the first to address non-criminalised forms of fire use rather than focussing solely on fire*setting*. Many of the benefits of fire use discussed in this paper align with facets of the Good Lives Model (GLM; Ward and Brown, 2004) which contemporary treatment programmes, such the FIPP (Gannon, 2012., as cited in Tyler *et al.,* 2018) and FIP-MO (Gannon and Lockerbie, 2011; as cited in Tyler *et al*., 2018) already draw upon. The focus, to date, however, has been on post-conviction rehabilitation, whereas Horsley (2020, in press) argues that an equal emphasis should be placed on early intervention programmes, i.e. pre-emptive approaches with young people. Currently in the UK, the Fire and Rescue Service deliver fire safety education to young people but there is no national standard and approaches vary from region to region (Foster, 2020a). Moreover, the vast majority of content focusses on fire safety (Foster, 2020a), which Horsley argues could be detrimental in some cases by building a 'taboo' narrative around fire.

The findings of this study could be used as a blueprint for the refinement of youth intervention programmes. The four themes could act as a framework for supporting young people in developing a healthy relationship with fire from an early age. This is consistent with the ethos of positive psychology. Ultimately, rather than introducing young people *only* to the risks and dangers of fire, they could also be introduced to the psychological benefits, such as the 'flow' state it can enable, the hope it represents and the reassurance it can offer via non-criminalised interactions. Horsley (2020, in press) suggests that focussing on the positives of fire can enable young people to form healthier relationships with it and, thus, reduce the chance of them engaging with fire in a criminalised manner later in life. Indeed, in her work with young people, Foster (2020b) acknowledges the notion of "good" fires, as well as "bad" (p. 65). There is now scope to develop this further as findings from this study have highlighted.

Limitations and Future Directions

It is important to note that there is an uneven gender split in the sample and this could be considered a limitation. Most of the firesetting literature is based on men (see Gannon *et al*., 2012b) and this should be borne in mind when interpreting the themes identified in this study.

All participants in this study used fire extensively at the time of interview meaning that findings cannot necessarily be extrapolated to members of the general public who use fire less frequently. Participants' choice to use fire regularly could mean they were more inclined to discuss the positives. Exploring the views and experiences of less frequent fire users in the future might provide a more balanced perspective.

The lack of heterogeneity with respect to nationality and cultural background in the sample is an important limitation. The use of fire is likely to vary greatly across different countries, cultures, races, ethnicities, societies, religions and many more variables (Fessler, 2006; Horsley, in press) and so in the future this information should be systematically collected

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and variations should be explored. In addition, data from women and men participants were not investigated separately. Although there is not yet convincing evidence of gender differences in the characteristics of arsonists (Fritzon and Miller, 2016), men certainly seem to commit more offences than women (Fritzon and Miller, 2016) and so gender differences in non-criminalised fire use might be worthy of exploration. Whilst no stark gender differences were observed in the current study, this was not explored systematically and so it should be pursued through future research. It is important, though, that any such approach adopts a non-binary perspective on gender and gives participants the opportunity to indicate the gender which they identity with.

Likewise, participant age was not considered in the current study. Future research could explore whether younger people interact with fire differently to those who are older. Exploring these matters is important in order to inform the aforementioned early intervention programmes. For example, practitioners could tailor different approaches for younger and older children, if the data suggests it is warranted. This is certainly the approach adopted by Foster (2020b).

Conclusion

This study was the first to explore non-criminalised fire use from a psychological perspective. It drew on principles of positive psychology, as well as the CoFU conceptualisation and has highlighted some of the benefits of fire use, in contrast to existing research which has focused largely on the risks and drawbacks. The findings could act as a blueprint for the development and refinement of early intervention programmes for young people, which is consistent with the growing interest in the application of strengths-based approaches in forensic psychology.

Acknowledgments

Disclosure statement

Data availability statement

Although anonymised, interview transcripts contain detailed information about participants' backgrounds, occupation/s, and life history from which identification might be possible. To protect anonymity the author does not intend to share the data, however selected extracts from transcripts can be provided upon request.

Implications for practice

- Provides a balanced perspective on fire use, including 'healthy' forms of the behaviour.
- Can inform the development and refinement of youth firesetting/ fire safety interventions.

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