Performing Artists and Anomalous Experiences: Overexcitability, Creativity, and Trauma History Are Part of the Picture[1]

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Abstract: *Objective*: To evaluate the relations of anomalous experiences with five overexcitabilities, cumulative trauma exposure, and Beyond the Personal creative process, with samples of performing artists, athletes, and control participants. Method: This is a cross-sectional study (N = 454) in which participants were administered in one session five self-report instruments to assess the five overexcitability dimensions, past childhood adversity and trauma events, creative experiences, and anomalous experiences. *Analyses* included inter-instrument and intergroup analyses, with a regression analysis that focused only on performing artists (n = 248), and a moderation analysis to determine a moderating effect of cumulative trauma on other variables. *Results*: Results showed that, compared to athletes and controls, performing artists had greater overexcitabilities, higher Beyond the Personal creative experiences, and more anomalous experiences, but no differences in cumulative trauma. Imaginational overexcitability, cumulative trauma, Beyond the Personal creative experience, and emotional overexcitability explained 32% of the variance in anomalous experiences in the performing artists group. The moderation analysis did not reach significance. *Conclusion*: The findings in this study suggest that a desire to create works that expand Beyond the Personal, coupled with elevated overexcitability factors, relate to greater sensitivity and awareness of novel and unusual experiences, including anomalous experiences.

Keywords: anomalous experiences, creativity, overexcitability, performing artists, trauma

Highlights

- The examination of the relation between anomalous experiences and overexcitability is seldom included in either field of research.
- The focus on performing artists and their anomalous experience prevalence profile adds to the literature, specifically about the predicting variables of imaginational and emotional overexcitabilities, as well as the creative process, Beyond the Personal.

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• The comparison between performing artists, athletes, and control participants illustrates unique anomalous experience differences between these three groups.

Performing artists are both interpreters and generators of creative products (Kogan & Kangas, 2006; Thomson et al., 2009). They work within a collaborative field that includes other artists, technicians, and audience members. All influence the creative and performance experience (Osipovich, 2006). To function in this complex discipline, performers must gain technical skills necessary to succeed in their specific performance domain (e.g., theater, dance, music, singing) as well as psychological skills that will enhance emotional expressivity, tolerance for uncertainty, and stress management (Byron et al., 2010). The primary purpose of this study was to evaluate the relational patterns of anomalous experiences, overexcitability traits, a sense that the creative process expands beyond the personal experience of the individual performer, and past trauma exposure. Previous research has indicated that these factors may be related, and this study delves deeper into this association within a performing artist sample.

In general, artists report different types of anomalous experiences (Cardeña et al., 2012; Holt, 2019; Holt et al., 2004). Throughout the ages, themes of the paranormal have been explored in performance (drama, dance, opera, music, film), and "supernatural" practices are evident in the performing arts as well. In most theaters, placing a ghost light on stage each night is routine. Theater folklore holds that the light will chase away the ghosts or that they will perform in the theater when everyone else leaves the building (https://chicagocritic.com/theatre-superstitions). Performers are reticent to utter the name of Shakespeare's play, Macbeth, within a theater. This play is referred to as the "Scottish" play by performers so that they can avoid the perceived curse attached to it. The acceptance of these and many other practices illustrates the blurring of mental boundaries between the inner imagination, beliefs, and perceptions of the performer and their outside environment (Holt, 2019).

Because many parapsychology terms are used interchangeably (Schmidt, 2007), the following distinctions will be applied: (1) parapsychology (alongside psychology) is an experimental and academic discipline that investigates purported psychic phenomena; (2) paranormal is a collective term for phenomena such as extrasensory perceptions, telepathy, precognition, clairvoyance, psychokinesis (telekinesis), near death experiences, synchronicity, and apparitional experiences; (3) psi addresses the unknown factors of gaining information from a distance via extrasensory perceptions or psychokinesis (Schmidt, 2007; Zahran, 2017); and in some individuals, (4) anomalous experiences may be characterized by extreme perceptual realism such as apparitions of individuals or objects that are not physically present, out-of-body experiences that involve quasi-perceptual viewing the self from an external vantage point, lucid dreaming, auditory or visual hallucinations, sensing a presence of someone alive or dead, mediumistic experiences, and mystical experiences (Cardeña et al., 2018; Rabeyron & Loose, 2015). For simplicity's sake, this paper will use the term anomalous experiences, which will reference the following phenomena: deeply moving mystical or spiritual experiences, seeing apparitions or ghosts, out-of-body experiences, pre-cognition experiences, being guided by a "force," a feeling of being called to a place or activity, and belief in reincarnation or past lives. A significant percentage (30% - 70%) of the population reports anomalous experiences and even though anomalous experiences may be infrequent, they tend to be highly significant and meaningful (Drinkwater et al., 2017; Rabeyron et al., 2018; Ross & Joshi, 1992). Once individuals have an anomalous experience, they become sensitized to future anomalous experiences (Raberyon & Loose, 2015).

Performing artists often experience life with a heightened intensity of thought and imagination and a greater sensitivity to interactions with others and the world around them (Ackerman, 2009; Martowska et al., 2020; Martowska & Romanowicz, 2020; Thomson & Jaque, 2016a). This internal sensitivity drives them to explore and experience novelty (Holt et al., 2004) and they tend to experience daily life with more multifaceted visual-spatial and cognitive processes (van Thiel et al., 2019). Heightened imagination and sensory experiences are the norm for these individuals (van Thiel et al., 2019). Kazimierz Dabrowski, a Polish psychologist and psychiatrist, created an original model of personality development to explain the unique traits of intellectually gifted and talented individuals. Although overlapping, intellectual giftedness is associated with individuals who have an IQ of 125 or higher (Frances et al., 2016) whereas talented individuals can achieve high performance levels, including general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts aptitude, and psychomotor ability (Limont et al., 2014; Renzulli, 2011).

According to Dabrowski's Theory of Positive Disintegration, gifted/talented individuals are influenced by their genetic inheritance, the environment in which they are raised, and a unique drive for autonomy (Ackerman, 2009). The combination of these three factors propels them through a sequence of developmental challenges and conflicts that influences how they develop. The increased sensitivity to external and internal stimuli and the intensity of responses are collectively defined as overexcitability traits (Alias et al., 2013; Mendaglio & Tillier, 2006). Overexcitability is a concept that explains heightened psychophysiological arousal; it operates in five separate domains that may present separately or in combination (Alias et al., 2013): (1) psychomotor (surplus energy expressed in movement-oriented activities), (2) sensual (heightened awareness and need to engage via some or all of the senses), (3) imaginational (easily bored and escape into internally generated fantasy), (4) intellectual (passion for receiving and processing information and engaging in problem solving activities), and (5) emotional (relational awareness and sensitivity to emotional expression) (Falk et al., 1999; Piirto & Fraas, 2012). Heightened overexcitabilities may be discriminating factors when comparing gifted and non-gifted samples (Winkler & Voight, 2016). Interestingly, performing artists display elevated overexcitability in several or all of the five domains

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(Martowska, Matczak, et al., 2020; Martowska & Romanowicz, 2020; Medaglio & Tillier, 2006; Piirto & Fraas, 2012; Thomson & Jaque, a,b).

In performing artists, there is a direct relation between overexcitabilities and creativity (He et al., 2017: Martowska et al., 2020; Martowska & Romanowicz, 2020). Both overexcitability and creative processing experiences are higher in performing artists compared to athletes and active control participants (Thomson & Jaque, 2016, a,b). Individuals who possess one or several overexcitabilities tend to be creation-directed (Piirto & Fras, 2012; Rabeyron et al., 2018; Thalbourne, 2000; van Thiel et al., 2019), and they are open to novel experiences (Mendaglio & Tillier, 2006). Heightened overexcitabilities are also associated with increased intrapersonal awareness; this is vital for performing artists, in fact they have greater self-awareness compared to scientists and other professionals (Holt et al., 2004). As well, overexcitability factors are strongly associated with the Big Five personality trait, Openness to Experience (Limont et al., 2014; Vuyk et al., 2016). Engaging in the creative process involves a willingness to openly explore and, for many, there is a desire to create something that moves beyond the personal life of the creator (Nelson & Rawlings, 2009, 2010). Creativity and openness to experience are features associated with anomalous experiences (Holt et al., 2004).

Performing artists with a history of childhood adversity and adult traumatic events tend to value their creativity; it may operate as a resilience factor for individuals who were poly-victimized, in part because it can provide an outlet for personal expression and may offer a way to connect with others (Corley, 2010; Richtner & Lofsten, 2014; Thomson & Jaque, 2018). Anomalous experiences may also operate as a resilience factor as they are often associated with both mental health and heightened creativity (Cardeña et al., 2012, 2017; Palmer & Braud, 2002; Rabeyron et al., 2018). The exploration and psychological processing of past trauma and loss experiences may be facilitated by creative expression (Corley, 2010; Metzl & Morrell, 2008); the acceptance of anomalous experiences may add to creative exploration (Cardeña et al., 2014). Research study findings indicate that creativity and anomalous experiences can serve as coping strategies under conditions such as childhood adversity (abuse, neglect, family dysfunction) or traumatic events (Irwin, 2000; Rabeyron & Loose, 2015). Heightened anomalous experiences have been identified in individuals who are classified as unresolved for past abuse or loss, specifically when these events involve attachment figures and other close significant relationships (Marcusson-Clavertz et al., 2017; Thomson & Jaque, 2012, 2012a, 2014). One of the hallmark indicators for lack of resolution is an unconscious denial that the event occurred (Main et al., 2003). In some unresolved individuals, paranormal events are attributed to the abuse and/or loss experiences (i.e., precognition that abuse or loss would occur, appearance of spirits to protect them from pain); this is regarded as a strategy to minimize or deny these painful events (Marcusson-Clavertz et al., 2017). The creative effort to cope with traumatic events may influence a receptiveness for the paranormal; this receptiveness may offer meaning or an explanation related to the traumatic events, which then may enhance resilience and adaptation rather than intensifying distress (Bonanno, 2004; Marcusson-Clavertz et al., 2017). Further, exposure to more childhood adversity in a performing artist sample was associated with more intense appreciation of the creative processes (Thomson & Jaque, 2018).

The desire to further examine anomalous experiences in performing artists grew from previous findings in our laboratory (Thomson & Jaque, 2014). In this study, we hypothesized that there is a significant relation of anomalous experiences with the five overexcitabilities, cumulative trauma exposure, and the creative process, Beyond the Personal. Second, we hypothesized that performing artists would differ from athletes and control participants, with higher scores on most overexcitability scales, anomalous experiences, cumulative trauma, and Beyond the Personal creative process.

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Method

Participants

After receiving ethics approval from the university Institutional Human Review Board (#1213-116-i-a), this cross-sectional study included a sample (*N* = 454) of performing artists, athletes, and controls. The sample was recruited via word of mouth from a university and community sample. The volunteers met with the Investigators of the study and were provided a brief explanation about the study purpose and the process of informed consent. See Table 1 for demographic details. A sub-sample of pre-professional/professional performing artists (*n* = 248) was then selected to conduct a more specific investigation on performing artists. The majority of performers were dancers (*n* = 219, 89%), with opera singers, actors, and directors completing the sample (*n* = 34, 12%). The inclusion criteria were: trained as a performing artist for five or more years and having received financial remuneration for at least one performance. For athletes, trained for five or more years and competed at the regional, national, or international level. The control sample engaged in recreational sport or community performing arts activities.

Table 1

Descriptive Statistics (N = 454): Number (Percentage), Mean (SD)

Variable	Descriptive Statistics		
	Performers	Athletes	Controls
Age (years)	22.9(5.5)	24.1(3.7)	23.3 (3.9)
Males	*n* = 52 (21%)	54 (63%)	53 (40%)
Females	*n* = 136 (79%)	32 (37%)	80 (60%)
Major Ethnicity			
Black	*n* = 41 (17%)	*n* = 8 (9%)	*n* = 18 (14%)
Asian	*n* = 54 (22%)	*n* = 12 (14%)	*n* = 37 (28%)
White	*n* = 94 (38%)	*n* = 43 (50%)	*n* = 37 (28%)
Latinx	*n* = 56 (23%)	*n* = 22 (26%)	*n* = 39 (29%)

Procedure

All participants completed an informed consent form and a brief biographical screener to determine years of training, previous injuries and illnesses, and level of performing/competing. Five self-report instruments were administered to assess the five overexcitability dimensions, past childhood adversity and trauma events, creative experiences, and anomalous experiences. These measurements were completed in a dance studio, rehearsal hall, or laboratory. A smaller sample (*n* = 152) returned to the laboratory one year later to determine the test - retest reliability of the ICMI anomalous items.

Measurements

Cumulative Trauma (CumT): This factor was derived by combining the 10 items of the Adverse Childhood Experience Questionnaire (ACE) with the eight items in the Traumatic Event Questionnaire (TEQ). The ACE is a dichotomous 10 item self-report instrument that assesses categories of childhood abuse, neglect, and household dysfunction (Felitti et al., 1998; Felitti & Anda, 2010). A total score of yes responses is derived, regardless of frequency or intensity. The abuse category probes for emotional, physical, and sexual abuse; the neglect category evaluates emotional and physical neglect. The household dysfunction category includes mother treated violently, substance abuse, parental separation or divorce, household member imprisoned or suffering a mental illness The ACE has excellent validity and reliability (Felitti et al., 1998). The TEQ (Lauterbach & Vrana, 2001; Vrana & Lauterbach, 1994) is a self-report 11-item dichotomously scored instrument. Only the eight items that assessed exposure to accidents, natural disasters, crime, rape, adult abusive experiences, witnessing death/mutilation of someone, being in a dangerous/life-threatening situation, and receiving news of an unexpected death of a loved one were included. The TEQ has excellent validity and reliability (Vrana & Lauterbach, 1994). Three items were excluded from the TEQ when

the cumulative trauma score was calculated. They included the item probing for childhood abuse because it was assessed in the ACE. The two other TEQ items excluded were any other traumatic event not listed (this item does not specify the type of abuse which made it difficult to determine if it was a clear marker for traumatic exposure) and traumatic event(s) that were too difficult to discuss with anyone (this did not add to the total score but rather indicated the participants disclosure difficulties). The last two TEQ items discussed were excluded because they did not add further categorical information about types of traumatic events. In this study, the Cronbach alpha score for Cumulative Trauma was adequate, α = .74.

The *Experience of Creativity Questionnaire (ECQ)* (Nelson & Rawlings, 2009) gathers information associated with experiential and existential processes. The ECQ was developed from previous qualitative research findings on an artist sample. It is a Likert-type rating ranging from 1 (definitely not my experience) to 5 (very much my experience), and it has adequate reliability and validity. The ECQ probes for five separate experiential factors (distinct experience, power/pleasure, absorption, anxiety, clarity/preparedness) and three separate existential factors (centrality, transformation, beyond the personal). Two sample questions from the ECQ include: "I put myself in the mood I wanted my creative work to take on." and "I have found there is a compulsive, addictive quality to the experience of being engaged in the creative process." Only Beyond the Personal scale was included. In this study it had low reliability (3 items, α = .62), which may be related to only three items comprising this scale. Beyond the Personal is a scale that examines concern about whether the creative work will communicate with others and explores a desire to expand beyond the confines of the self.

Inventory of Childhood Memories and Imaginings (ICMI) (Wilson & Barber, 1983) is a 52-item dichotomous questionnaire that probes for experiences and memories from childhood and adulthood (23 items for childhood experiences and 29 items for adult experiences). The scoring is a simple total of all items endorsed by the participant and this instrument has excellent validity and reliability (Wilson & Barber, 1983). Following the practice of previous researchers who examined only the ICMI paranormal items as a separate scale (Irwin, 1990; Klinger et al., 2009; Thalbourne, 2008; Thalbourne & Maltby, 2008), in this study only the seven anomalous experience items (34, 35, 36, 37, 38, 39, 40) were examined. These items probed for deeply moving personal religious, spiritual, or mystical experiences, perceiving apparitions or ghosts, out-of-body experiences, precognitive experiences, automatic creations that were controlled by a spirit, telepathic messages, awareness of past lives, and experiencing the oneness with the universe. In this study, Cronbach's alpha was adequate (α = .67). Six months after the first round of data collection, a smaller sample of performing artists (n = 152) returned to the laboratory for data collection. Based on the test – re-test reliability analysis the ICMI-Anomalous scale was adequate (r = .70, p < .001).

The *Overexcitability Questionnaire–II* (OEQ-II) (Falk et al., 1999) is a 50-item measurement used to assess the five forms of overexcitability. Each overexcitability subscale (psychomotor, sensual, imaginational, intellectual, emotional) consists of ten 5-point Likert items ranging from 1 (not at all) to 5 (very much like me). Mean scores are derived for each scale. There are no OEQ-II cutoff scores that identify giftedness or talent; however, scores above the 75th percentile can be regarded as elevated overexcitability (Falk et al., 1999). The OEQ-II has high internal reliability and internal consistency and good content validity (Falk et al., 1999). In this study, Cronbach alpha scores include psychomotor (OE-P) (α = .81), sensual (OE-S) (α = .86), imaginational (OE-I) (α = .89), intellectual (OE-T) (α = .89), and emotional (OE-E) (α = .74).

Data Analysis

SPSS 28 (IBM Corp., Armonk, NY) was used for all statistical analyses. First, descriptive statistical analyses were conducted. Cronbach's alpha and test-retest results are included in the measurement section. ANOVAs were conducted to determine whether

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the performing artists and athletes in the current study differed from the musicians, actors, and intellectually gifted participants in three previously reported studies. Chi square analyses evaluated frequency distributions. Multivariate analyses of covariance (MANCOVAs) were conducted to determine group differences (performing artists, athletes, controls) for all variables examined in this study, with age and sex as covariates, based on previous study findings indicating sex differences in the overexcitabilities questionnaire (Martowska & Romanowicz, 2020; Piirto et al., 2008); although there are less differences between androgynous males and females (Miller et al., 2009). In all MANCOVA analyses, Bonferroni corrections were used to determine the differences between the group means. According to the guidelines outlined by Dugard et al. (2010), all MANCOVA assumptions were met. Box's M test showed that covariance matrices across groups were equal, $M = 88.17$, F (72,215357) = 1.19, $p = .13$. Pearson correlations were conducted to investigate the relation between continuous variables for the performing artist sample. The results from this investigation informed the inclusion of the variables to predict anomalous experiences in a multiple linear regression analysis. The independent variables included all five overexcitability dimensions, cumulative trauma, and Beyond the Personal creative experience scale. A moderation analysis was then conducted to determine the effect of cumulative trauma on the relation between Beyond the Personal creative process and anomalous experiences.

Results

The descriptive statistics for age, sex, and major ethnicity for performing artists, athletes, and controls are included in Table 1. The responses on the ICMI anomalous experience items were stable ($r = .70$, $p < .001$) based on the test – retest analyses conducted one year later. This supports the reliability of participant's responses over time regarding their anomalous experiences.

We compared the overexcitability mean values in this study with the means gathered from three different studies. ANOVAs from summary data were conducted to determine whether the performing artists and athletes in the current study differed from the musicians, actors, and intellectually gifted participants in the previously reported studies (see Table 2). In this study, the performing artists differed from the following groups (higher scores): female musicians, male musicians, and intellectually gifted in OE-P ($p < .001$, $p = .003$, $p = .001$, respectively), higher than intellectually gifted in OE-S ($p < .001$), lower than actors, both groups of musicians, and intellectually gifted in OE-I ($p < .001$), and lower than female musicians and higher than intellectually gifted participants in OE-E ($p = .001$ and $p < .001$, respectively).

The athletes in the current study differed (higher) from the female musicians ($p < .001$), male musicians ($p = .011$), and intellectually gifted ($p = .009$) in OE-P, lower than female musicians and actors in OE-S ($p < .001$), lower than actors, female musicians, male musicians, and intellectually gifted ($p < .001$) in OE-I, and lower than actors and female musicians ($p < .001$) in OE-E. The performing artists and athletes in the current study did not differ from any of the participant groups in the referenced studies for OE-T. Unlike the athletes, the performing artists in the current study did not differ from musicians (female and male), actors, and intellectually gifted samples. See Table 2 for mean and standard deviation details reported in the comparison studies.

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Table 2

Mean Scores (SD) for Overexcitability Scales Across Five Studies

	OE-P	OE-S	OE-I	OE-T	OE-E
Current Study					
Performers	3.7(0.7)	3.9(0.7)	2.6(0.9)	3.7(0.8)	3.7(0.7)
Athletes	3.7(0.7)	3.2(0.8)	2.1(0.8)	3.5(0.8)	3.2(0.7)
Controls	3.2(0.8)	3.3(0.8)	2.3(0.8)	3.3(0.8)	3.3(0.7)
Martowska & Romanowicz, 2020					
Females					
Musicians	3.1(0.8)	3.9(0.6)	3.6(0.7)	3.8(0.6)	4.1(0.5)
Controls	3.2(0.8)	3.1(0.8)	3.3(0.9)	3.6(0.7)	4.0(0.5)
Males					
Musicians	3.1(0.7)	3.4(0.7)	3.4(0.6)	3.7(0.6)	3.6(0.6)
Controls	3.6(0.7)	3.0(0.9)	3.2(0.5)	3.8(0.5)	3.2(0.6)
Martowska et al., 2020					
Actors	3.6(0.7)	4.1(0.6)	3.7(0.8)	3.8(0.6)	4.0(0.6)
Controls	3.2(0.8)	3.2(0.9)	2.9(0.7)	3.7(0.5)	3.5(0.7)
Limont et al. 2014					
Gifted	3.3(0.8)	3.1(0.8)	3.3(0.8)	3.7(0.6)	3.2(0.6)
Control	3.4(0.7)	2.9(0.8)	3.0(0.8)	3.3(0.7)	3.2(0.8)
Falk et al. 1999					
Students	3.3(0.8)	3.3(0.9)	2.9(0.8)	3.5(0.8)	3.7(0.8)

The first hypothesis, that there would be a significant relation between anomalous experiences, the five overexcitabilities, cumulative trauma experiences, and Beyond the Personal creative process, was supported. Specifically, anomalous experiences were low to moderately associated with Beyond the Personal creative process, cumulative trauma, and the five overexcitability variables. Beyond the Personal creative process was low to moderately associated with cumulative trauma and the five overexcitabilities. There were low associations with cumulative trauma and psychomotor overexcitability, intellectual overexcitability, and Beyond the Personal creative process, and a low-moderate association with anomalous experiences. All five overexcitabilities were moderately associated with each other (Table 3).

Table 3

Correlation Matrix

	1	2	3	4	5	6	7	8
1. AE								
2. Bey Pers	.32**							
3. CumT	.36**	.18**						
4. OE-P	.32**	.32**	.14*					
5. OE-S	.22**	.26**	.10	.38**				
6. OE-I	.40**	.34**	.101	.39**	.39**			
7. OE-T	.33**	.31**	.13*	.58**	.51**	.48**		
8. OE-E	.32*	.25**	.10	.44**	.47**	.45**	.50**	

Notes. AE = anomalous experiences; Bey Pers = beyond personal creative experience; CumT = cumulative traumatic events; OE-P = overexcitability-psychomotor; OE-S = overexcitability-sensual; OE-I = overexcitability-imaginative; OE-T = overexcitability-intellectual; OE-E = overexcitability-emotional. * $p < .05$, ** $p < .01$

The findings from the multiple linear regression analyses partially supported the first hypothesis. In the regression analyses, only performing artists were included. This decision was based on the chi square results and informed by the MANCOVA group comparison results (see chi square and MANCOVA results in the following paragraphs). Imaginational overexcitability ($F(1,238) = 48.16$, $p < .001$, $R^2 = .19$, $\beta = .27$), cumulative trauma ($\Delta F(1,237) = 35.76$, $p < .001$, $\Delta R^2 = .11$, $\beta = .30$), Beyond the Personal ($\Delta F(1,236) = 8.38$, $p = .004$, $\Delta R^2 = .03$, $\beta = .16$), and emotional overexcitability ($\Delta F(1,235) = 4.30$, $p = .039$, $\Delta R^2 = .01$, $\beta = .13$) explained 32% of the variance in anomalous experiences. Psychomotor OE, sensual OE and intellectual OE were not significant predictors. Imaginational and emotional overexcitabilities, along with more cumulative trauma, and heighted creative experiences that expand Beyond the Personal predicted anomalous experiences.

The second hypothesis was that performing artists would differ from athletes and control participants, with higher scores on most overexcitability scales, anomalous experiences, cumulative trauma, and Beyond the Personal in the performing artist group. This was examined in the chi square analysis for each anomalous experience item

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collected in the ICMI and in the MANCOVA. Chi square analyses were conducted to determine frequency patterns for the anomalous experience items in the performing artist, athlete, and control participant groups. The performing artist group had higher frequencies than athlete and control groups for the items (n = 467): deeply moving religious, spiritual or mystical experiences, χ^2 = 15.07, p < .001, perceiving ghosts or apparitions, χ^2 = 11.30, p = .004, precognitive experiences, χ^2 = 12.68, p = .002, past lives, χ^2 = 8.53, p = .01, and experience of feeling one with the universe, χ^2 = 7.17, p = .03. The items relating to out of body experience and creating written work or songs that were out of personal control did not differ significantly across groups. These results support findings that identified an association with creative individuals and increased anomalous experiences (Holt et al., 2004). The chi square results in this study suggest that performing artists may be more open to anomalous experiences than athlete and control groups.

The MANCOVA had significant main effects (Wilks's Λ = .69, F(16,884) = 11.08, p < .001, η^2 = .17). Age (p = .01) and sex (p < .001) were significant covariates. Only cumulative trauma was not significantly different among the three groups. This result may be related to the high variance in this variable. Compard to the athlete and control groups, the performing artist group had more anomalous experiences, heightened beyond the personal creative processing experience, and elevated sensual, imaginational, intellectual, and emotional overexcitabilities. Both the performing artist and athlete groups had elevated psychomotor overexcitability compared to the control group. The mean, standard deviation, and test of between subjects effects for the performing artists, athletes, and control groups are outlined in Table 4.

Table 4

Mean Descriptive Statistics, Standard Deviations (SD), and MANCOVA (age and sex covariates) Group Comparisons (Performing Artists, Athletes, Control Group)

Item	PA	Athl	Control
AE	2.5(1.9)	1.5(1.7)	1.8(1.8)***
CumT	3.5(2.9)	3.2(3.4)	2.9(2.7)
BeyPers	10.7(2.7)	7.3(3.3)	8.3(3.1)***
OE-P	3.7(0.7)	3.7(0.7)	3.2(0.7)***
OE-S	3.9(0.7)	3.2(0.8)	3.3(0.8)***
OE-I	2.6(0.8)	2.1(0.8)	2.3(0.8)***
OE-T	3.7(0.8)	3.5(0.8)	3.3(0.8)***
OE-E	3.7(0.7)	3.2(0.7)	3.3(0.7)***

Note: PA = Performing Artists, Athl = Athletes, AE = anomalous experiences, CumT = cumulative trauma, OE-P = overexcitability – psychomotor, OE-S = overexcitability – sensual, OE-I = overexcitability – imagination, OE-T = overexcitability – intellectual, OE- E = overexcitability – emotional, ***p < .001

The moderation analysis to determine the effect of cumulative trauma on beyond the personal creative experience and anomalous experiences was not significant (p = .07). Although the significance value was not significant there may be a very small relation and the marginal effects were in the predicted direction; cumulative trauma may moderate personal creative experience and anomalous experiences if a larger sample was studied. Future studies should consider conducting a Bayesian analysis to determine whether this result truly supports the null hypothesis.

Discussion

The primary purpose of this study was to investigate performing artists and explore associations with anomalous experiences, overexcitability traits, Beyond the Personal creative experience, and cumulative trauma exposure. In summary, the main outcomes in this study included low to moderate associations among anomalous experiences, Beyond the Personal creative process, and the five overexcitabilities, with cumulative

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trauma having small associations with anomalous experiences, Beyond the Personal, as well as psychomotor and intellectual overexcitability. Compared to the athletes and control participants, the performing artists were more likely to experience five of the seven anomalous experience variables. There were no group differences for out of body experience and creating written work or songs that were out of one's personal control. Overall, 80% of the performing artists experienced at least one anomalous event, a similar percentage to those in American and British population surveys (76%) (Drinkwater et al., 2017).

Study outcomes also included some important findings in the group difference analyses (MANCOVA). All variables were higher in the performing artist group compared to the athlete and control groups, with the following exceptions: psychomotor overexcitability was similar within the performing artist and athlete groups and there were no group differences for cumulative trauma. The lack of difference for cumulative trauma may be related to the high variance in this measure, but the mean cumulative trauma scores suggested that the performing artist group had more trauma exposure compared to the other two groups despite a lack of statistical difference. When the performing artist group was examined independently, anomalous experiences were predicted by imaginational and emotional overexcitability, cumulative trauma, and Beyond the Personal creative experience. Based on these findings, performing artists might be more receptive to anomalous experiences if they experienced several childhood and adult traumatic events, exhibit a desire to create something that moves beyond their own individual experiences, and if they have innate traits to engage in their imagination and emotional sensitivity.

This study's results support previous findings that indicate receptiveness to anomalous experiences by artists (Holt, 2019). Compared to athletes and controls, the performing artists in this study had a higher prevalence rate for five anomalous experiences; however, the limitation in this study is that we were not able to determine if these anomalous experiences were positive, negative, or neutral. Future studies should explore the valence of these anomalous experiences.

Studies that have examined the relation between anomalous experiences and creativity have yielded inconsistent findings, most likely due to the multifaceted aspects that characterize creativity (Holt et al., 2004). To offset this limitation, this study narrowed the focus on creativity to the experience of moving Beyond the Personal while engaging in the creative process. This scale identifies the performing artist's desire to have creative products that exist outside the narrow bounds of the individual creator and into the realm of the universal (Nelson & Rawlings, 2009). This form of creative experience was identified as a significant predictor of anomalous experiences in the performing artists. When the creative process, Beyond the Personal, is heightened there is a sense that the creative engagement provides an expansive sense of self, the world, and beyond (Nelson & Rawlings, 2009). A similar sense can be derived when experiences are both exceptional and positive (Falk et al., 1999; Palmer & Braud, 2002). Both Beyond the Personal and positive exceptional experiences offer a sense of meaning, although anomalous experiences may be experienced as positive or negative (Rabeyron et al., 2018). In the study conducted by Cardeña and Terhune (2014), absorption and self-transcendence related to the ability to experience consciousness alterations during a hypnotic procedure. In this study on performing artists, Beyond the Personal has a self-transcendent quality and was a predictor of anomalous experiences.

Beyond the Personal creative process was also associated with the five overexcitabilities, a finding that indicates a relation with the overexcitability traits and the creative process experience (He et al., 2017; Piirto & Fras, 2012; Rabeyron et al., 2018; Thalbourne, 2000; van Thiel et al., 2019). This association was higher in the performing artist group compared to the athletes and control participants.

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The overexcitability pattern in this study, indicated that athletes and performing artists were similar for psychomotor overexcitability and higher than the control group (Thomson & Jaque, 2016a). This result may be influenced by the fact that there were more dancers in this performing artist sample; dancers share similar physical demands with athletes (Bird, 2009; Koutedakis & Jamurtas, 2004). Sensual, imaginational, intellectual, and emotional overexcitabilities were higher in the performing artists compared to the athletes and control participants; similar findings were identified in several studies (Martowska et al., 2020; Martowska & Romanowicz, 2020; Mendaglio & Tillier, 2006; Piirto & Fraas, 2012; Thomson & Jaque, 2016, a,b; Winkler & Voight, 2016).

Imaginational and emotional overexcitability were significant predictors of anomalous experiences in the performing artist group. These two overexcitability traits may promote an increased awareness and acceptance of anomalous experiences in performing artists. We hypothesized that imaginational overexcitability would be the only overexcitability variable to predict anomalous experiences. Imaginational overexcitability did explain 17% of the variance; however, emotional overexcitability explained another 1% of the variance. Imaginational overexcitability may enhance intellectual giftedness/ talent development by propelling individuals to escape boredom by engaging in internal multifaceted imaginative constructs (Ackerman, 2009). When imaginational overexcitability is an innate dimension, retreating into imaginative worlds or openly exploring anomalous or exceptional experiences are common (Falk et al., 1999; Palmer & Braud, 2002). Emotional overexcitability was not originally included in our hypothesis. Based on Dabrowski's Theory of Positive Disintegration (Ackerman, 2009), emotional overexcitability is regarded as the most important overexcitability to shape personality growth and development (Ackerman, 2009; Mendaglio & Tillier, 2006). Emotional overexcitability is associated with psychological understanding and is often heightened in individuals who pursue careers in the performing arts (Mendaglio & Tillier, 2006). Optimal engagement of emotional overexcitability promotes a global understanding of relationships; however, it can also operate negatively by increasing neurotic self-absorption (Harrison & van Haneghan, 2011; Mendaglio & Tillier, 2006). Despite the potential negative valence of emotional overexcitability, in general, this overexcitability trait is associated with greater emotion regulation and well-being (Perrone-McGovern et al., 2015).

Childhood adversity and trauma exposure have been associated with anomalous experiences (Cardeña et al., 2012, 2017; Palmer & Braud, 2002; Rabeyron et al., 2018), including in an unresolved classification based on an assessment in the Adult Attachment Interview for trauma and adversity (Thomson & Jaque, 2014). Increased exposure to cumulative trauma is also associated with increased valuing of the creative process (Thomson & Jaque, 2018). Cumulative trauma, along with Beyond the Personal creative process, were strong predictors of anomalous experiences in performing artists. Beliefs in anomalous experience are often associated with a desire to gain control over life (Irwin, 1990, 2000) and may operate as a way to find connection with the self, world, and beyond (Nelson & Rawlings, 2009), especially when past loss and abuse remain unresolved (Thomson & Jaque, 2014). To further explore cumulative trauma, a moderation analysis was conducted to determine if cumulative trauma moderated the effects of Beyond the Personal on anomalous experiences. Trauma was not a significant moderator, but the lack of significance was marginal. Cumulative trauma was not a significant predictor of imaginational or emotional overexcitability, a finding that supports the trait characteristic of overexcitability, regardless of exposure to childhood or adult adversity (Ackerman, 2009).

The limitations in this study include the inherent subjective bias of self-report measures. The cross-sectional design precludes longitudinal causal predictions. The sample examined in this study had a larger representation of pre-professional and professional dancers as well as female performers. Previous studies have indicated that

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dancers have higher serotonergic neurotransmission while dancing, which is associated with higher human religious and spiritual experiences (Bachner-Melman et al., 2005). The fact that this sample had more dancers may directly influence the anomalous experiences findings.

Future studies should include a more evenly distributed representation of performing artists. The implementation of other self-report measures such as the Paranormal Belief Scale (Drinkwater et al., 2017) would increase validity and reliability beyond the use of the anomalous experience items contained in the ICMI questionnaire. Creating measurements that differentiate anomalous experience beliefs from specific paranormal experiences will also provide more clarity in future research (Wahbeh et al., 2020). As well, determining the intensity and valence of anomalous experiences may further increase understanding about anomalous attributions (Lange et al., 2019). We recommend that future studies explore overexcitabilities in other populations to see if anomalous experiences are associated with overexcitabilities (Alias et al., 2013).

The primary purpose of the study was to investigate performing artists and anomalous experiences. The uniqueness of this study was the inclusion of the five overexcitability traits, cumulative trauma exposure, and a sense that the creative process can expand beyond the narrow constraints of the personal. Examining performing artists and their relationship with anomalous experiences addresses a gap in anomalous experiences research (Cardeña, 2015, 2018). The overexcitability traits, along with creative and adversity experiences may open performing artists to a greater sensitivity and awareness of novel and unusual anomalous experiences (Holt, 2019; Osipovich, 2006).

References

Ackerman, C. M. (2009). The essential elements of Dabrowski's Theory of Positive Disintegration and how they are connected. *Roeper Review, 31*(2), 81 – 95. https://doi.org/10.1080/02783190902737657

Alias, A., Rahman, S., Majid, R. A., & Yassin, S. F. M. (2013). Dabrowski's overexcitabilities profile among gifted students. *Asian Social Science, 9*(16), 120. https://doi.org/10.5539/ass.v9n16p120

Bachner-Melman, R., Dina, C., Zohar, A. H., Constantini, N., Lerer, E., Hoch, S., Sella, S., Nemanov, L., Gritsenko, I., Lichtenberg, P., Granot, R., & Ebstein, R. P. (2005). AVPR1a and SLC6A4 gene polymorphisms are associated with creative dance performance. *PLoS Genetics, 1*(3), e42. https://doi.org/10.1371/journal.pgen.0010042

Bird, H. A. (2009). The performing artist as an elite athlete. *Rheumatology, 48*, 1469 – 1470. https://doi.org/10.093/rheumatology/kep257

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after adverse events? *American Psychologist, 59*(1), 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Byron, K., Khazanchi, S., & Nazarian, D. (2010). The relationship between stressors and creativity: A meta-analysis examining competing theoretical models. *Journal of Applied Psychology, 95*(1), 201 – 212. https://doi.org/10.1037/a0017868

Cardeña, E. (2014). A call for an open, informed study of all aspects of consciousness. *Frontiers in Human Neuroscience, 8*, 17. https://doi.org/10.3389/fnhum.2014.00017

Cardeña, E. (2015). The unbearable fear of Psi: On scientific suppression in the 21st Century. *Journal of Scientific Exploration, 29*(4), 601 – 620.

Cardeña, E. (2018). The experimental evidence for parapsychological phenomena: A review. *American Psychologist, 73*(5), 663 – 677. https://doi.org/10.1037/amp0000236

Cardeña, E (2020). Depicting the ethereal, Part 1: Visual art and psi. *Journal of Parapsychology, 84*(2), 202 – 219. http://doi.org/10.30891/jopar.2020.02.04

Cardeña, E., Iribas, A. & Reijman, S. (2012). Art and psi. *Journal of Parapsychology, 76*(2), 3–25. http://doi.org/10.30891/jopar2020.02.04

Cardeña, E., Lynn, S. J., & Krippner, S. (2014) *Varieties of anomalous experience: Examining the scientific evidence* (2nd ed.). American Psychological Association. http://doi.org/10.1037/14258-000

2023, Vol. 3, No. 1, pp. 110–139

Cardeña, E., Lynn, S. J., & Krippner, S. (2017). The psychology of anomalous experiences: A rediscovery. *Psychology of Consciousness: Theory, Research and Practice, 4*(1), 4 – 22. https://doi.org/10.1037/cns0000093

Cardeña, E. & Terhune, D. B. (2014). Hypnotizability, personality traits, and the propensity to experience alterations of consciousness. *Psychology of Consciousness: Theory, Research, and Practice, 1*(3), 292-307. http://dx.doi.org/10.1037/cns0000026

Corley, C. (2010). Creative expression and resilience among Holocaust survivors. *Journal of Human Behavior in the Social Environment, 20*(4), 542 – 552. https://doi.org/10.1080/10911350903275325

Drinkwater, K., Denovan, A., Dagnall, N., & Parker, A. (2017). An assessment of the dimensionality and factorial structure of the Revised Paranormal Belief Scale. *Frontiers in Psychology, 8*, 1693. https://doi.org/10.3389/fpsyg.2017.01693

Dugard, P, Todman, J, & Staines, H. (2010). *Approaching multivariate analysis: A practical introduction* (2nd ed). Routledge.

Falk, R. F., Lind, S., Miller, N. B., Piechowski, M. M., & Silverman, L. K. (1999). *The Overexcitability Questionnaire – Two (OEQII): Manual scoring system and questionnaire.* Institute for the Study of Advanced Development.

Felitti, V. J., & Anda, R. F. (2010). The relationship of adverse childhood experiences to adult medical disease, psychiatric disorders and sexual behavior: Implications for healthcare. In R.A. Lanius, E. Vermetten, & C. Pain (Eds.), *The impact of early life trauma on health and disease: The hidden epidemic* (pp. 77 – 87). Cambridge University Press.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P. & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study. *American Journal of Preventive Medicine, 14*, 245 – 258. https://doi.org/10.1016/s0749-3797(98)00017-8

Frances, R., Hawes, D. J., & Abbott, M. (2016). Intellectual giftedness and psychopathology in children and adolescents: A systematic literature review. *Exceptional Children, 82*(3), 279 – 302. https://doi.org/10.1177/0014402915598779

Gallagher, S. (2022). Openness to experience and overexcitabilities in a sample of highly gifted middle school students. *Gifted Education International, 38*(2), 194 – 228. https://doi.org/10.1177/02614294211053283

Harrison, G. E., & van Haneghan, J. P. (2011). The gifted and the shadow of the night: Dabrowski's overexcitabilities and their correlation to insomnia, death anxiety, and fear of the unknown. *Journal for the Education of the Gifted, 34*(4), 669 – 697. https://doi.org/10.1177/016235321103400407

He, W-J., Wong, W-C., & Chan, M-K. (2017). Overexcitabilities as important psychological attributes of creativity: A Dabrowskian perspective. *Thinking Skills and Creativity, 25*, 27 – 35. https://doi.org/10.1016/j.tsc.2017.06.006

Holt, N. J. (2019). The expression of schizotypy in the daily lives of artists. *Psychology of Aesthetics, Creativity, and the Arts, 13*, 359–371. https://doi.org/10.1037/aca0000176

Holt, N. J., Delanoy, D. L., & Roe, C. A. (2004). Creativity, subjective paranormal experiences and altered states of consciousness. In *2004 Proceedings of the Parapsychological Association Convention* (pp. 433–436). Parapsychological Association.

Irwin, H. J. (1990). Fantasy proneness and paranormal beliefs. *Psychological Reports, 66*, 655-658. https://doi.org/10.2466/pr0.1990.66.2.655

Irwin, H. J. (2000). Belief in the paranormal and a sense of control over life. E*uropean Journal of Parapsychology, 15*, 68 – 78.

Klinger, E., Henning, V.R., & Janssen, J.M. (2009). Fantasy-proneness dimensionalized: Dissociative component is related to psychopathology, daydreaming as such is not. *Journal of Research in Personality, 43*, 506 – 510. https://doi.org/10.1016/j.jrp.2008.12017

Kogan, N., & Kangas, B. L. (2006). Careers in the dramatic arts: Comparing genetic and interactional perspectives. *Empirical Studies in the Arts, 24*(1), 43 – 54. https://doi.org/10.2190/4U55-41U4-QDGK-CHK9

Koutedakis, Y., & Jamurtas, A. (2004). The dancer as a performing athlete: Physiological considerations. *Sports Medicine, 34*(10), 651 – 661. https://doi.org/10.2165/00007256-200434100-00003

Lange, R., Ross, R. M., Dagnall, N., Irwin, H. J., Houran, J., & Drinkwater, K. (2019). Anomalous experiences and paranormal attributions: Psychometric challenges in studying their measurement and relationship. *Psychology of Consciousness: Theory, Research, and Practice, 6*(4), 346 – 358. https://doi.org/10.1037/cns0000187

Lauterbach, D., & Vrana, S. (2001). The relationship among personality variables, exposure to traumatic events and severity of posttraumatic stress symptoms. *Journal of Traumatic Stress, 14*, 29 – 38. https://doi.org/ 10.1023/A:1007831430706

Limont, W., Dreszer-Drogorob, J., Bedynksa, S., Sliwinska, K., & Jastrzebska, D. (2014). "Old wine in new bottles"? Relationships between overexcitabilities, the Big Five personality traits and giftedness in adolescents. *Personality and Individual Differences, 69*, 199 – 204. https://doi.org/10.1016/j.paid.2014.06.003

Main, M., Goldwyn, R., & Hesse, E. (2003). *Adult attachment scoring and classification systems* (Unpublished manuscript), University of California at Berkeley.

Marcusson-Clavertz, D., Gusic, S., Bengtsson, H., Jacobsen, H., & Cardeña, E. (2017). The relation of dissociation and mind wandering to unresolved/disorganized attachment: An experience sampling study. *Attachment and Human Development, 19*(2), 170 – 190. https://doi.org/10.1080/14616734.2016.1261914

Martowska, K., Matczak, A., & Jozwik, K. (2020). Overexcitability in actors. *Psychology of Aesthetics, Creativity, and the Arts, 14*(1), 81 – 86. https://doi.org/ 10.1037/aca0000192

Martowska, K., & Romanowicz, M. (2020). Overexcitability profile among university students at music-focused institutions. *Roeper Review, 42*(4), 271 – 280. https://doi.org/10.1080/02783193.2020.1815265

Mendaglio, S., & Tillier, W. (2006). Dabrowski's Theory of Positive Disintegration and giftedness: Overexcitability research findings. *Journal for the Education of the Gifted, 30*(1), 68 – 87. https://doi.org/10.1177/016235320603000104

2023, Vol. 3, No. 1, pp. 110–139

Miller, N. B., Falk, R. F., & Huang, Y. (2009). Gender identity and the overexcitability profiles of gifted college students. *Roeper Review, 31*, 161 – 169. https://doi.org/10.1080/02783190902993920

Metzl, E. S., & Morrell, M. A. (2008). The role of creativity in models of resilience: Theoretical explorations and practical applications. *Journal of Creativity in Mental Health 3*(3), 303 – 318. https://doi.org/10.1080/15401380802385228

Nelson, B., & Rawlings, D. (2009). How does it feel? The development of the Experience of Creativity Questionnaire. *Creativity Research Journal, 21*(1), 43 – 53. https://doi.org/10.1080/10400410802633442

Nelson, B., & Rawlings, D. (2010). Relating schizotypy and personality to the phenomenology of creativity. *Schizophrenia Bulletin, 35*(2), 388 – 399. https://doi.org/10.1093/schbul/sbn098

Osipovich, D. (2006). What is a theatrical performance? The Journal of Aesthetics and Art Criticism, 64(4), 461 – 470. https://doi.org/10.1111/j.1540-594X.2006.00224.x

Palmer, G., & Braud, W. (2002). Exceptional human experiences, disclosure, and a more inclusive view of physical, psychological, and spiritual well-being. *Journal of Transpersonal Psychology, 34*(1), 29 – 59.

Perrone-McGovern, K. M., Simon-Dack, S. L., Beduna, K. N., Williams, C. C., & Esche, A. M. (2015). Emotions, cognitions, and well-being: The role of perfectionism, emotional overexcitability and emotion regulation. *Journal of the Education of the Gifted, 38*(4), 343 – 357. https://doi.org/10.1177/0162353215607326

Piirto, J., & Fraas, J. (2012). A mixed-methods comparison of vocational and identified-gifted high school students on the overexcitability questionnaire. *Journal for the Education of the Gifted, 35*(1), 3 – 34. https://doi.org/10.1177/0162353211433792

Piirto, J., Montgomery, D., & May, J. (2008). A comparison of Dabrowski's overexcitabilities by gender for American and Korean high school gifted students. *High Ability Studies, 19*(2), 140 – 153. https://doi.org/ 10.1080/13598130802504080

Rabeyron, T., Charlet, O., Row, C., Mousseau, M-C., & Deledalle, A. (2018). Anomalous experiences, mental health, and creativity : Is Psi the missing link? *Journal of Consciousness Studies, 25*(3-4), 207 – 232. Corpus ID: 199855861

Rabeyron, T., & Loose, T. (2015). Anomalous experiences, trauma, and symbolization processes at the frontiers between psychoanalysis and cognitive neurosciences. *Frontier in Psychology, 6*, 1926. https://doi.org/ 10.3389/fpsyg.2015.01926

Renzulli, J. S. (2011). What makes giftedness? Reexamining a definition. *Phi Delta Kappan, 92*(8), 81 – 88. https://doi.org/10.1177/003172171109200821

Richtner, A., & Lofsten, H. (2014). Managing in turbulence: How the capacity for resilience influences creativity. *R & D Management, 44*(2), 137 – 151. https://doi.org/10.1111/radm.12050

Ross, C.A., & Joshi, S. (1992) Paranormal experiences in the general population. *Journal of Nervous and Mental Disease, 180*(6), 357–361. https://doi.org/10.1097/00005053-199206000-00004

Schmidt, J. (2007). Parapsychology. In K. von Stuckrad, (ed.). *The Brill dictionary of religion.* Brill Publishers. https://doi.org/10.1163/1872-5287_bdr_COM_00339

Thalbourne, M. A. (2008). Predicting the ostensible paranormal experiences canvassed in the Inventory of Childhood Memories and Imaginings. *Australian Journal of Parapsychology, 8*(2), 180–191.

Thalbourne, M. A. (2000). Transliminality and creativity. *Journal of Creative Behavior, 34* (3), 193–202. https://doi.org/10.1002/j.2162-6057.2000.tb01211.x

Thalbourne, M. A., & Maltby, J. (2008). Transliminality, thin boundaries, unusual experiences, and temporal lobe lability. *Personality and Individual Differences, 44*(7), 1617–1623. https://doi.org/10.1016/j.paid.2008.01.022

Thomson, P., & Jaque, S. V. (2012). Dissociation and the Adult Attachment Interview in artists. *Attachment and Human Development, 14*(2), 145 – 160. https://doi.org/10.1080/14616734.2012.661602

Thomson, P., & Jaque, S.V. (2012a). Holding a mirror up to nature: Psychological vulnerability in actors. *Psychology of Aesthetics, Creativity and the Arts, 6*(4), 361 - 369. https://doi.org/10.1037/a0028911

Thomson, P. & S.V. Jaque. (2014). Unresolved mourning, supernatural beliefs and dissociation: A mediation analysis. *Attachment and Human Development, 16*(5), 499 - 514. https://doi.org/10.1080/14616734.2014.926945

Thomson, P., & Jaque, S. V. (2016a). Overexcitability: A psychological comparison between dancers, opera singers and athletes. *Roeper Review, 38*(2), 84 – 92. https://doi.org/10.1080/02783193.2016.1150373

Thomson, P., & Jaque, S. V. (2016b). Overexcitability and optimal flow in talented dancers, singers and athletes. *Roeper Review, 38*(1), 32 – 39. https://doi.org/10.1080/02783193.2015.1112865

Thomson, P., & Jaque, S. V. (2018). Childhood adversity and the creative experience in adult professional performing artists. *Frontiers in Psychology, 9*, 111. https://doi.org/10.3389/fpsyg.2018.00111

Thomson, P., Keehn, E. B., & Gumpel, T. P. (2009). Generators and interpreters in a performing arts population: Dissociation, trauma, fantasy proneness, and affective states. *Creativity Research Journal, 21*(1), 72 – 91. https://doi.org/10.1080/10400410802633533

van Thiel, M., Nauta, N., & Derksen, J. (2019). An experiential model of giftedness: Giftedness from an internal point of view, made explicit by means of the Delphi Method. *Advanced Development, 17*, 1 – 15.

Vrana, S., & Lauterbach, D. (1994). Prevalence of traumatic events and posttraumatic psychological symptoms in a non-clinical sample of college students. *Journal of*

2023, Vol. 3, No. 1, pp. 110–139

Traumatic Stress, 7, 298–302. https://doi.org/ 10.1007/BF02102949

Vuyk, M. A., Krieshok, T. S., & Kerr, B. A. (2016). Openness to experience rather than overexcitabilities: Call it like it is. *Gifted Child Quarterly, 60*(3), 192 – 211. https://doi.org/ 10.1177/0016986216645407

Wahbeh, H., Yount, G., Vieten, C., Radin, D., & Delorme, A. (2020). Measuring extraordinary experiences and beliefs: A validation and reliability study. *F1000 Research, 8*, 1741. https://doi.org/10.12688/f1000research.20409.3

Wilson, S. C., & Barber, T. X. (1983). The fantasy-prone personality: Implications for understanding imagery, hypnosis and parapsychological phenomena. In A. A. Sheikh (Ed.), *Imagery: Current theory, research and application* (pp. 340-387). John Wiley & Sons.

Winkler, D., & Voight, A. (2016). Giftedness and overexcitability: Investigating the relationship using meta-analysis. *Gifted Child Quarterly, 60*(4), 243 – 257. https://doi.org/10.1177/0016986216657588

Zahran, S. K. (2017). What is Psi? From anti-parapsychology to psi as a next scientific revolution: Theoretical revies and hypothesized vision. *American Journal of Applied Psychology, 5*(2), 33 – 44. https://doi.org/10.1269/ajap-5-2-1

Darstellende Künstler und anomale Erfahrungen: Übererregbarkeit, Kreativität und Trauma-Vorgeschichte sind Teil des Bildes

Paula Thomson **S. Victoria Jaque**

Zusammenfassung: Zielsetzung: Es sollten die Beziehungen zwischen anomalen Erfahrungen und fünf Übererregbarkeiten, kumulativer Traumaexposition und dem kreativen Prozess ‚Beyond the Personal" anhand von Stichproben von darstellenden Künstlern, Sportlern und Kontrollpersonen untersucht werden. Methode: Es handelt sich um eine Querschnittsstudie (N = 454). Den Teilnehmern wurden in einer Sitzung fünf Selbsteinschätzungsinstrumente vorgelegt, um fünf Dimensionen von Übererregbarkeit, frühere Missgeschicke und Traumaereignisse in der Kindheit, kreative Erfahrungen und anomale Erfahrungen zu bewerten. Die Analysen umfassten Analysen zwischen den Instrumenten und zwischen den Gruppen, mit einer Regressionsanalyse, die sich nur auf darstellende Künstler (n = 248) konzentrierte, und einer Moderationsanalyse, um einen moderierenden Effekt des kumulativen Traumas auf andere Variablen zu bestimmen. Ergebnisse: Die Ergebnisse zeigten, dass darstellende Künstler im Vergleich zu Sportlern und Kontrollpersonen größere Übererregbarkeiten, höhere Kreativitätserfahrungen ‘Beyond the Personal’ und mehr anomale Erfahrungen aufwiesen, aber keine Unterschiede bei kumulativen Traumata. Imaginative Übererregbarkeit, kumulatives Trauma, kreative Erfahrung ‘Beyond the Personal’ und emotionale Übererregbarkeit erklärten 32% der Varianz der anomalen Erfahrungen in der Gruppe der darstellenden Künstler. Die Moderationsanalyse erreichte keine Signifikanz. Schlussfolgerung: Die Ergebnisse dieser Studie deuten darauf hin, dass der Wunsch, Werke zu schaffen, die ‚Beyond the Personal’ hinausgehen, in Verbindung mit erhöhten Übererregbarkeitsfaktoren eine größere Sensibilität und Aufmerksamkeit für neue und ungewöhnliche Erfahrungen, einschließlich anomaler Erfahrungen, mit sich bringen.

German translation: Eberhard Bauer

Artistas Performáticos e Experiências Anômalas: Superexcitabilidade, Criatividade e Histórico de Traumas Fazem Parte do Contexto

Paula Thomson **S. Victoria Jaque**

Resumo: Objetivo: Avaliar as relações entre experiências anômalas com cinco superexcitabilidades, exposição cumulativa a traumas e processos criativos Além do Pessoal (Beyond the Personal), com amostras de artistas performáticos, atletas e grupo de controle. Método: Trata-se de um estudo transversal (N = 454). Os participantes receberam em uma sessão cinco instrumentos de relato pessoal para avaliar as cinco dimensões de superexcitabilidade, adversidades passadas na infância e eventos traumáticos, experiências criativas e experiências anômalas. As análises incluíram observações inter-instrumentos e intergrupo (n = 248) e uma análise de moderação para determinar um efeito moderador de trauma cumulativo em outras variáveis. Resultados: Os resultados mostraram que, em comparação com atletas e grupo de controle, os artistas performáticos tiveram maiores superexcitabilidades, mais experiências criativas Além do Pessoal (Beyond the Personal) mais altas e mais experiências anômalas, mas sem diferenças em traumas cumulativos. Superexcitabilidade imaginativa, trauma cumulativo, experiência criativa Além do Pessoal (Beyond the Personal) e superexcitabilidade emocional explicaram 32% da variação em experiências anômalas no grupo de artistas performáticos. A análise de moderação não alcançou significância. Conclusão: Os achados deste estudo sugerem que o desejo de criar obras que expandam para Além do Pessoal (Beyond the Personal), juntamente com fatores elevados de superexcitabilidade, relacionam-se a uma maior sensibilidade e consciência de experiências novas e incomuns, incluindo experiências anômalas.

Portuguese translation: Antônio Lima

Artistas Escénicos y Experiencias Anómalas: La Sobreexcitabilidad, La Creatividad, y la Historia Traumática Forman Parte del Cuadro

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Resumen: Objetivo: Evaluar las relaciones de las experiencias anómalas con cinco sobreexcitabilidades, la exposición acumulada al trauma, y proceso creativo más allá de lo personal, con muestras de artistas escénicos, atletas, y grupo control. Método: Estudio transversal (N = 454) en que se administró a los participantes en una sesión cinco instrumentos de autoinforme para evaluar cinco dimensiones de la sobreexcitabilidad, adversidad en la infancia pasada y acontecimientos traumáticos, experiencias creativas, y experiencias anómalas. Los análisis incluyeron análisis entre instrumentos e intergrupos, con un análisis de regresión que se centró sólo en los artistas escénicos (n = 248), y un análisis para determinar el efecto moderador del trauma cumulativo sobre otras variables. Resultados: Los resultados mostraron que, en comparación con los atletas y los controles, los artistas escénicos tuvieron mayores sobreexcitabilidades, mayores experiencias creativas más allá de lo personal, y más experiencias anómalas, pero no difirieron en el trauma cumulativo. La sobreexcitabilidad imaginativa, el trauma cumulativo, la experiencia creativa más allá de lo personal, y la sobreexcitabilidad emocional explicaron el 32% de la varianza en las experiencias anómalas en el grupo de artistas escénicos. El análisis de moderación no fue significativo. Conclusiones: Los resultados de este estudio sugieren que el deseo de crear obras que se expandan más allá de lo personal, junto con factores de sobreexcitabilidad elevados, se relacionan con una mayor sensibilidad y consciencia de experiencias novedosas e inusuales, incluyendo experiencias anómalas.

Spanish translation: Etzel Cardeña

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