

Therianthropy: Wellbeing, schizotypy and autism in individuals who self-identify as non-human

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**Therianthropy: Wellbeing, schizotypy and autism in individuals who self-identify as
non-human**

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Abstract

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5 Therianthropy is the belief that one is at least part non-human animal. This study aimed to
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7 address the dichotomization surrounding therianthropy in relation to mental health and
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9 wellbeing. One hundred and twelve therians and 265 non-therians completed Ryff's Scales of
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11 Psychological Wellbeing, the O-LIFE questionnaire, and the Autism Spectrum Quotient.
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13 Results found that therians scored lower on variables that are associated with positive social
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15 relationships. Such findings may be explained by cognitive factors and/or social factors that
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17 are associated with the stigmatization of cross species identities. However being a therian
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19 moderated the relationship between both autism and introverted anhedonia in relation to
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21 autonomy. Thus a therian identity may act as a protective factor for those experiencing higher
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23 levels of autism and schizotypy.
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32 **Keywords:** Autism, cross-species identity, non-human, schizotypy, therianthropy, wellbeing
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Therianthropy: Wellbeing, schizotypy and autism in individuals who self- identify as non-human

A recent definition of therianthropy is that it is the experience of feeling or believing that one is part or whole non-human animal mentally, spiritually or biologically but that this does not constitute actual physical transformation (Strill, 2008). Although the classic use of the term therianthropy in myths and archaeological artefacts indicates actual physical changes to a human-animal hybrid, the therian community today is clear that physical transformation is an impossibility.

Since 1993, there has been a growing online community of therians; therian being a self-identified term coined by the community that comes from the term therianthrope. The type of non-human animal(s) integrated into the person's identity is known as their theriotype(s). Lupa (2007) reported, through an online survey, that a variety of both extant and extinct theriotypes are identified within the therian community, the most common being canids, followed closely by felines. Such surveys conducted by the non-academic community are informative but lack the procedures in place to confirm the scientific rigour of such studies. In fact, little academic research has been conducted on the therian community, in part because of a fear, experienced by many members of the community, of being labelled as mentally ill (Grivell, Clegg, & Roxburgh, 2014).

Whilst certainly in countries such as the UK and the USA national identity is in part constructed around positive images of non-human animals (the symbol of the eagle is synonymous with American patriotism) and around being animal loving nations there is also considerable use of non-human animal images and metaphors to denote negative attributes of both individuals and groups (Baker, 1993). Therianthropic images often suggest impurity, being subhuman, and lacking in integrity, as well as challenging the individual's bodily identity, and sense of self (Baker, 1993). Those individuals who identify as therians thereby

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challenge conventional conceptions of “being human” and in doing so may invoke categorizations of mental illness.

The dichotomy of humans and culture versus animals and nature is strongly advocated in the “West” but is not pervasive across all human societies (Hurn, 2012; DeMello, 2012). Hunter-gatherer groups in particular often hold much more fluid concepts regarding identity between non-human animals and humans. Beliefs vary but themes around non-human animal ancestry, reincarnation, and transformation into other species are such examples (Hurn, 2012; DeMello, 2012). Although such beliefs have historically been present, in Western societies today the human animal boundary is firmly sealed.

This is borne out in the treatment of therianthropy in much of the Western world where therianthropy has been situated within psychiatry (Coll, O'Sullivan, & Browne, 1985; Garlipp, Godecke-Koch, Dietrich, & Haltenhof, 2004; Keck, Pope, Hudson, McElroy, & Kulick, 1988; Khalil, Dahdah, & Richa, 2012). The term used in psychiatry is often lycanthropy, rather than therianthropy, and there is some disagreement as to whether these terms are interchangeable or distinct (Garlipp, 2007; Keck et al., 1988). It is not in the scope of this paper to resolve this conflict and so for the purposes of this discussion the literature on lycanthropy will be considered to be relevant to that of therianthropy.

Clinical cases of lycanthropy have been documented across the world (Coll et al., 1985; Keck et al., 1988; Khalil et al, 2012; Nasirian, Banazadeh, & Kheradmand, 2009; Nejad & Toofani, 2005; Rao, Gangadhar, & Janakiramiah, 1999). The majority of psychiatric reports consider it a symptom of functional psychosis (Nejad & Toofani, 2005; Rao et al., 1999) although Moselhy (1999) suggests the possibility of an organic origin in some cases. There is also some evidence that intoxication with substances such as alcohol, cannabis, and ecstasy can induce lycanthropic delusions, although these substances may function to expose a previously dormant psychosis (Keck et al., 1988; Nasirian et al., 2009). However, it should be

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noted that the literature on lycanthropy is based on small samples and there are
inconsistencies in relation to its definition that may question the validity of some of the claims.
Nevertheless, the view within psychiatry is that lycanthropy is a transient medical symptom
that is alleviated by medication, although some advocate the use of psychotherapeutic
techniques (Garlipp et al., 2004). The idea that such experiences are transient and treatable
differentiates them from the experiences of a non-clinical population of self-identified
therians. In a qualitative study that considered the identity of five therians, participants
described their therianthropy as often beginning in childhood/teenage years and being a
lifelong experience (Grivell et al, 2014). They were aware of the likely perceptions from
society regarding their beliefs and talked about the need to control their therianthropic
impulses.

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Therianthropy has been aligned with transgenderism and the term “trans-species” has
been coined by some therians to describe their experiences of feeling as if they were born into
the wrong body (Grivell et al., 2014; Robertson, 2013). Robertson (2013) highlights how
such experiences parallel the symptoms described in DSM-IV for Body Dysmorphic Disorder.
This idea is further advanced by Gerbasi et al. (2008) in a study on “furries”. Furries are
distinct from therians in that they are interested in anthropomorphic animals as opposed to
real life non-human animals. However, whilst furries and therians are separate groupings
there is cross over with approximately one in five furries also claiming therian identity
(Plante, Reysen, Roberts, & Gerbasi, 2013). Within their 2008 study Gerbasi et al. asked a
sample of furries two questions; “Do you consider yourself to be less than 100% human” and
“If you could become 0% human, would you?” (p. 201). Those furries who answered in the
affirmative for both questions were also more likely to agree with statements suggesting that
they were a non-human species trapped in a human body and that they felt discomfort with
their human body (Gerbasi et al., 2008). These responses are reflective of experiences of

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therians (Grivell et al., 2014), thus suggesting a therian presence within the sample. Gerbasi et al. (2008) suggest that this group of participants may have “species identity disorder” thus aligning such experiences with mental illness, although more recently Gerbasi et al have moved away from such pathologization to a belief that therian identity lies along a continuum of neurological diversity as opposed to it being a disorder (K. Gerbasi, personal communication, 20th May, 2016). Probyn-Rapsey (2011) also disputes the pathologization of such experiences, highlighting the challenges that have been identified with aligning homosexuality and transgendered identities with mental illness. In particular, she proposes that such pathologization arises, from the needs of those who maintain rigid identity boundaries, to conserve the social norms.

Although experiencing unusual beliefs relative to the social norms is generally aligned with a predisposition towards mental ill health there is evidence that such beliefs may positively influence perceptions of levels of distress. Schofield and Claridge (2007) suggest that being high in unusual beliefs, which include magical thinking and perceptions outside of the social norms, and low in cognitive disorganization, which would indicate good concentration and decision making, interacted to allow paranormal experiences to be less distressing. Moreover other studies have demonstrated that being high in unusual experiences and low in the negative aspects of schizotypy, such as cognitive disorganization and introverted anhedonia, a measure of an inability to enjoy physical and social pleasures, impacted positively on psychological wellbeing (Mohr & Claridge, 2015). Thus, unusual experiences and beliefs should not be automatically categorized as evidence of mental ill health.

From a review of the literature it appears that therianthropy has the potential to be contextualized as mental illness. However more recently research has not provided any direct evidence of mental ill health and has taken a less pathologizing perspective (Grivell et al.,

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2014; Lupa, 2007; Robertson, 2013). In fact Robertson (2013) makes the association between the spiritual beliefs expressed by some therians and the beliefs of Neopagans and Neoshamans, suggesting that such beliefs are not beyond the boundaries of normality within the West. This dichotomy between pathologizing and normalizing therian experiences needs to be addressed in part by considering the wellbeing and mental health of therians. To this end, this study considered psychological wellbeing, schizotypy (a personality dimension that has associations with schizophrenia proneness but is also related to high levels of creativity in non-clinical samples), and autism in a sample of therians and non-therians. An autism scale was included in the study as anecdotally the therian community make claims that there are high numbers of “mildly autistic” individuals within the community and there are some assertions that there are links between therianthropy and autism. Given that there is no previous research on these variables for therians the predictions will be non-directional (two-tailed). The predictions are that there will be a significant difference between therians and non-therians on all scales of wellbeing, schizotypy, and autism. Also that schizotypy and autism will predict therian status and that being a therian will act as a moderator variable (i.e. buffer the impact), between autism and wellbeing, and between negative schizotypy and wellbeing.

Method

Participants

Therians.

There were 112 self-identified therian participants with an age range of 18 to 60 years (mean = 23.49 years, *SD* = 6.49 years). In terms of gender identity 30 were male, 58 were female, 7 were transgendered, and 17 were other (gender neutral, androgynous, or gender fluid). In terms of ethnicity, therian participants were predominantly White British/American (44.6%), with 21.4% being other White background. Other ethnicity included Black African

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2 (1.8%), Black English/American (1.8%), Chinese (1.8%), mixed White/Caribbean (1.8%),
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4 South American (1.8%), Japanese (0.9%), mixed Asian/White (0.9%), mixed White/African
5 (0.9%), and Native American (0.9%), 21.4% did not respond.

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7 There were a variety of theriotypes represented within the therian sample, although
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9 carnivores predominated. Canids were the most common at 57.3%. Of these, wolves were the
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11 largest proportion (39.3% of all theriotypes), but foxes (4.5%), mixed canine (4.5%), dog
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13 (3.6%), coyote (1.8%), jackal (0.9%), dingo (0.9%), and cladotherian canine (0.9%) were
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15 also present. The second most common theriotype was feline at 19.7% of the therian sample.
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17 Felines were made up of big cat (9.8%), domestic cat (3.6%), cat (1.8%), cougar (1.8%),
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19 feline (1.8%), and cladotherian feline (0.9%). The third largest category was reptiles at 9.0%,
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21 which included dragonsⁱ (6.3%), dinosaurs (1.8%), and snake (0.9%). Anthropomorphic
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23 therians made up 2.7% of the therian sample. Other theriotypes included bird (2.7%),
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25 polymorph (1.8%), deer (0.9%), racoon (0.9%), and shark (0.9%). Therian participants had
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27 identified as therian for between 0 and 42 years (mean = 10.55 years, SD = 8.26 years).

28 29 30 31 32 33 34 ***Non-therians.***

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36 There were 265 non-therians with an age range of 18 to 64 years (mean = 21.72 years,
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38 SD = 7.14 years). Fifty were male, 211 were female, 0 were transgendered, and 4 were other.
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40 As with therians, the most commonly stated ethnicity for non-therians was White
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42 British/American (66.8%), with Black African (5.3%) and Indian (4%) being the next two
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44 most frequently identified ethnic categories. Other ethnicities for non-therians included other
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46 White background (3.4%), Black Caribbean (2.6%), mixed White/Caribbean (2.6%), Black
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48 British/American (1.9%), other Asian background (1.9%), mixed White/African (1.5%),
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50 Pakistani (1.1%), White Irish (0.8%), Chinese (0.8%), mixed Asian/White (0.8%),
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52 Bangladeshi (0.4%), and South American (0.4%).

53 54 55 56 57 58 ***Materials***

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Data were collected from self-identified therians and non-therians using an online questionnaire.

Demographic questions. In the first section participants were asked about gender identity, age, ethnicity, and employment status and if they had ever been diagnosed with a mental health problem, and if so what diagnoses they had been given. However, it should be noted that participants may have included diagnoses that were not provided by a qualified mental health practitioner but, for example, may have been self-diagnosed.

Therianthropy questions. The second section asked all participants if they were a therian. The rest of this section was then for therians only to complete. Questions included naming their theriotype(s), and length of time having identified as a therian.

Ryff's Scales of Psychological Wellbeing. The third section consisted of Ryff's Scales of Psychological Wellbeing; autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance (Ryff, 1989). These six scales consisted of nine items and each of the items were rated on a Likert scale from *strongly disagree* to *strongly agree*. Higher scores indicate better wellbeing. There is evidence of good validity and reliability for these scales (Ryff, 1989). For the present study Cronbach's alpha scores (a measure of internal reliability of the scales) were all above the acceptable minimum of 0.7; autonomy (0.84), environmental mastery (0.83), personal growth (0.78), positive relations with others (0.84), purpose in life (0.81), and self-acceptance (0.88).

Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE) (short version). The fourth section measured schizotypy. This scale is designed to measure the personality dimension schizotypy in a non-clinical population and is not a diagnostic tool. Although some literature (for example, see Mason, Linney, & Claridge, 2005) suggests that high scores on the schizotypy scale indicates proneness to psychosis it should be noted that many individuals who score highly on this scale are not considered to have a mental health problem.

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It was therefore felt appropriate to use this scale given the association of lycanthropy to psychosis in the psychiatric literature. This measure consists of four factors: unusual experiences, cognitive disorganization, introverted anhedonia, and impulsive non-conformity. Participants are required to respond *yes* or *no* to a series of statements. A score of 1 is given for each answer in the affirmative except for reverse scored items. Thus, higher scores indicate higher levels of schizotypy. The short scales version of the O-LIFE Inventory demonstrates good reliability and validity (Mason et al., 2005). For the present study Cronbach's alphas were; unusual experiences (0.79), cognitive disorganization (0.75), introverted anhedonia (0.70), and impulsive non-conformity (0.57). All schizotypy factors other than impulsive non-conformity had acceptable alpha levels. Further statistical analysis indicates that removing items from the impulsive non-conformity scale to improve the alpha level would make little difference to its reliability. Whilst impulsive non-conformity will be considered in the results the data should be considered with caution.

Autism Spectrum Quotient (AQ). The final section measured autism using the Autism Spectrum Quotient (Baron-Cohen, Wheelwright, Skinner, Martin, & Clubley, 2001). The AQ is a 50 item questionnaire that measures five different areas associated with autism: social skill, attention switching, attention to detail, communication, and imagination. Items are scored on a four point Likert scale from *definitely agree* to *definitely disagree*. Each item scores one point if the response most closely associated with autism is identified either strongly or mildly. Higher scores indicate higher levels of autistic traits, although it should be noted that the AQ is not a diagnostic instrument. The AQ has demonstrated good validity and reliability (Hoekstra, Bartels, Cath, & Boomsma, 2008; Woodbury-Smith, Robinson, Wheelwright, & Baron-Cohen, 2005). For the present study the Cronbach's alpha for the whole scale was at an acceptable level of 0.81.

Procedure

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Therian participants were recruited through the following therianthropy internet forums with permission from the administrators: Werelist (<http://www.werelist.net/>), Otherkin (<http://www.otherkincommunity.net/>), Forest Horizon (<http://werebeastcommunity.proboards.com/>). One of the research team also had contact with a well-respected member of the therian community who was able to distribute information on the study to therians who did not engage in online forums.

The non-therian community was partly accessed from a university in the UK. The researchers went into first and second year undergraduate research methods classes to advertise the study. Members of the therianthropy research group, which consists of therian and non-therian members (including the first and third authors), also placed adverts for the study on social media sites such as Facebook. The remainder of the non-therian sample was gained from non-therian individuals who engage in therian forums and individuals with an interest in therian research.

Participants were directed to the study via a link. This took them to information on the study that allowed them to give fully informed consent. Those individuals wishing to participate then pressed the consent button which led them to the first set of questions. At the end of the study the participants were debriefed. The study was given ethical clearance by The University of Northampton Social Sciences Ethics Committee and the British Psychological Society (BPS, 2007) guidelines for online research were adhered to.

Results

The mean scores for each of the wellbeing and mental health variables were calculated to allow for any omission of data by participants. Any participant who omitted more than 10% of the questions on any scale had the data for that scale removed. The data were assessed for normality to determine whether parametric or non-parametric tests should be conducted. To assess normality of data, z scores for skew and kurtosis were calculated by

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dividing the skew/ kurtosis score by their standard error. A z score of above 2.58 can be considered as not normally distributed (Clark-Carter, 2010). These scores were considered alongside visual inspections of histograms and Q-Q plots and indicated several violations of the normality assumption. Thus due to the multiple violations of normality, and with relatively small sample sizes in some subsamples, non-parametric analysis was conducted throughout with the exception of regression analysis. Previous research has shown that age and gender identity are confounds within wellbeing (Lindfors, Berntsson, & Lundberg, 2006), schizotypy (Mason & Claridge, 2006), and autism (Baron-Cohen et al., 2001) literature: comparisons were considered prior to any analysis to consider if the groups (therian/ non-therian) could be classed as homogenous with regards to age and gender identity. In order to control for multiple testing and possible Type 1 error a stricter α level was set at .01. There were significant differences between the gender identities in levels of positive relations (χ^2 (3) = 21.285, $p < .001$), environmental mastery (χ^2 (3) = 13.682, $p = .003$), and full AQ score (χ^2 (3) = 24.996, $p < .001$). However, post hoc analysis indicates these differences to be within the “other” category so within these analyses other is not included due to the small sample sizes. There was a significant correlation of age with autonomy ($\rho = .156$, $p = .001$). Because there is also a significant difference in age between therian (Median 21, Range 18-60) and non-therian (Median 19, Range 18-64) groups ($z = 4.025$, $p < .001$, $r = .209$) caution should be considered in the autonomy analysis, however age will not be controlled for due to the small effect sizes, where effect sizes are standardized measures of the magnitude of the difference.

50 51 *Comparisons of Therians and Non-Therians on Autism and Schizotypy*

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Multiple non-parametric comparison tests were conducted to assess the differences between the therian identity group and the non-therian identity group. Descriptive statistics (medians and ranges are reported due to the data violating assumptions of normality),

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2 inferential statistics, effect sizes, and confidence intervals of the median differences for each
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4 of the dependent variables can be found in Tables 1 and 2.

5 As can be seen in Table 1 there were significant differences between the
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7 groups with medium effect sizes on full autism score and on two of the subscales; social
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9 skills and communication. In each case individuals who identified themselves as therian
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11 scored higher than their non-therian counterparts. There were no significant differences
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13 between the groups on levels of imagination, attention switching, and attention to detail.
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17 Table 2 indicates that on the schizotypy scales therians scored higher on the subscales
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19 of unusual experiences and introverted anhedonia with a medium difference effect size.
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21 Impulsive non-conformity approached significance with a small effect size. For cognitive
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23 disorganization, however, both groups were very similar on their scores.
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27 *[Tables 1 and 2 about here]*

28 ***Mental Health Diagnosis***

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30 For therians, 59.8% claimed that they had not been diagnosed with a mental illness
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32 and 40.2% had. Of the non-therians, 83.8% claimed that they had not been diagnosed with a
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34 mental illness and 15.8% had (0.4% was missing data). The association between mental
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36 health diagnosis and whether an individual is a therian or not was significant, with a medium
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38 effect size ($\chi^2(1) = 26.044, N = 376, p \leq .001, \phi = -.263 [-.354, -.167]$). The odds of being
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40 diagnosed with a mental health issue for therians was three times (OR 3.6, 95% CI: 2.15-5.86)
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42 that of non-therians. Types of mental health diagnoses reported can be seen in Table 3.
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48 *[Table 3 about here]*

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50 A score of 32+ may indicate clinical levels of autistic traits, although this is not grounds for a
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52 diagnosis since levels of distress caused by such experiences needs to be taken into account
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54 before a diagnosis can be claimed (Baron-Cohen et al., 2001). Scores can be between 0 and
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56 50. Since computed mean score of 50 = 1, score of 25 = .5, etc. Therefore a score of 32
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2 = .64 so anyone scoring .64 or above would be considered somewhere on the autistic
3 spectrum. The relationship between therian status and AQ score was significant χ^2 (1, $N=$
4 354) = 11.331, $p = .002$, $\phi = .179$ [.077, .278] such that being a therian was associated with
5 having a score of 32 or higher on the AQ. The odds of a high autism score for therians was
6 almost six times (OR 5.93, 95% CI: 2.04-17.31) that of non-therians.
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11 *Predictors of Therian Status*

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13 It was predicted that schizotypy and autism may predict therian status. However,
14 wellbeing is not a trait, and is itself predicted by traits such as personality (Deiner, Suh,
15 Lucas, & Smith, 1999; Weiss, Bates, & Luciano, 2008), and so is unlikely to predict therian
16 status. Therefore, a logistic regression analysis was performed with therian status as the DV
17 and unusual experiences, cognitive disorganization, introverted anhedonia, impulsive non-
18 conformity, and full AQ as predictor variables. A total of 354 cases were analysed (23
19 participants were excluded from this analysis due to non-completion of one or more of the
20 scales; of these 87% were non-therians) and the full model significantly predicted therian
21 status. The model accounted for between 26.7% and 37.7% of the variance in therian status,
22 with 89.0% of the non-therians and 52.3% of the therians successfully predicted. Overall,
23 77.7% of the predictions were accurate (see Table 4 for individual coefficients).
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42 *[Table 4 about here]*

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44 Table 4 shows that unusual experiences, cognitive disorganization, introverted anhedonia,
45 and the overall autism score reliably predicted therian status. The values of the coefficients
46 reveal that an increase in scores in unusual experiences, introverted anhedonia and full autism
47 are associated with an increase in the odds of being a therian. However, the values of the
48 coefficients reveal that an increase in cognitive disorganization scores is associated with an
49 increase in the odds of being a non-therian. Of all the variables unusual experiences had the
50 biggest impact on therian/ non-therian status.
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Comparisons of Therians and Non-Therians on Wellbeing

For levels of wellbeing significant differences were found between the therians and the non-therians on the subscales of positive relations and environmental mastery with small to medium effect sizes. In both cases non-therians scored higher. There was also a significant difference in autonomy; therians experienced greater autonomy than non-therians. Purpose in life approached significance; however, the effect size was very small. There was no difference between the groups on the subscales of self-acceptance and personal growth (see Table 5).

[Table 5 about here]

The Moderating Effect of Therian Status on Autism/ Schizotypy and Wellbeing Status

In order to assess the potential moderating effect of therian status on the relationship between autism and wellbeing, as well as on schizotypy and wellbeing, the data were split by therian/ non therian status and correlations were run for the separate groups. In order to avoid multiple testing the minimum difference in correlation coefficients to gain a statistically significant effect at $\alpha = .05$ was computed using an adjustment of equation 1. Using a $z = 1.96$ and sample sizes of 112 (therian) and 265 (non-therian) any difference between correlation coefficients of .22 and above would be classed as significant at $p = .05$.

Equation 1:

$$z = \frac{r_1 - r_2}{\sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}}$$

Two relationships indicated differences in coefficients in simple z score difference calculations. Both were within the outcome variable of autonomy: the relationship between autism and autonomy (therian: $r = -.10$, non-therian: $r = -.33$, $r_{diff} = .23$), and the relationship between introverted anhedonia and autonomy (therian: $r = -.01$, non-therian: $r = -.23$, r_{diff}

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2 = .22). Follow up moderated multiple regression assessing the interaction between autism and
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therianthropy in predicting the outcome variable of autonomy indicated a significant
interaction effect with 14.8% variance explained overall. See Table 6 for the individual
coefficients.

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[Tables 6 and 7 about here]

Multiple regression assessing the interaction between introverted anhedonia and
therianthropy in predicting the outcome variable of autonomy indicated a significant
interaction effect with 13.5% variance explained. See Table 7 for the individual coefficients.

As can be seen in Figures 1, and 2 identifying as a therian appears to buffer the
relationship between autism and autonomy, as well as between introverted anhedonia and
autonomy. In both cases individuals who identify as therians report the same levels of
autonomy regardless of their levels of reported autism and introverted anhedonia whereas
individuals who do not identify as a therian show the expected relationship in each case. For
example with higher levels of autism non-therians show lower levels of autonomy.

[Figures 1 and 2 about here]

Discussion

This paper is, to the authors' knowledge, the first attempt to consider the wellbeing
and mental health of therians as compared to non-therians. The variety of theriotypes was
broadly similar to previously documented surveys by the therian community, with canids and
felines being most common (Lupa, 2007). Also, it is noteworthy that the majority of
ethnicities for the therian sample were not associated with societies that incorporate
therianthropic beliefs into their cultures. The time a participant had been a therian ranged
from 0 to 42 years and, with a mean of 10.55 years; this suggests that it is not a transient
condition, as argued for lycanthropy.

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A pattern emerges from a consideration of therians and non-therians that suggests that therians have greater difficulties in skills and experiences associated with relationships with other humans. Within the AQ sub-scales there is a clear division for therians who score more towards the autistic end of the spectrum on the sub-scales of social skills and communication, but for those sub-scales not associated with social skills there is no significant difference between therians and non-therians. Moreover, for wellbeing the two scales on which therians scored significantly lower than non-therians were positive relations with others, where low scorers have limited numbers of close relationships with others, often feeling alone, have difficulty feeling empathetic towards others, and are not willing to make concessions to maintain relationships (Ryff, 1989), and environmental mastery, particularly in relation to questions around fitting in with others.

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Given that the therian sample scored higher than non-therians on the autism scale this may suggest that cognitive differences associated with autism may also impact on therian wellbeing. For example, research on adults with autism spectrum disorders have found that high levels of loneliness, lower numbers of friendships and/or the perception of availability of support were associated with lower wellbeing scores (Mazurek, 2014, Renty & Roeyers, 2006). Future research could explore whether this was the case for a therian sample. Nevertheless, it should not be assumed that those higher on the autistic spectrum experience the same psychological and relational needs as those lower on the autistic spectrum. Some of these relationships may be with other therians who have similar relational requirements which allows for positive relationships but not as necessarily defined by scales designed for non-autistic individuals.

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to be supported in psychiatry as evidenced by the literature on clinical lycanthropy. Given the possible societal associations between “madness” and therianthropic beliefs therians can find it difficult to form relationships with non-therians and when they do they may have to suppress an aspect of themselves that is a fundamental part of their identity (Grivell et al., 2014), making close relationships difficult to maintain. Even if removed from the psychiatric arena those who deviate from social norms are generally considered aberrant in some way. For children in the West the job of their carers is to guide them to develop into civilised adults that indicates a clear division between humans and other animals (Melson, 2001). Those older children and adults who embody more animalistic behavior are therefore considered immature and defective in cognitive abilities such as rationality (DeMello, 2012, pp. 330-331, Myers, 1999). In Western societies the very essence of being human is focused around the cognitive and behavioral “superiority” compared to other animals (Hurn, 2012). For therians these social constructions around humanness and animality present considerable barriers to expressing their therianthropy and thus developing relationships with non-therians.

It is possible that the theriotype may implicitly influence the acceptance or otherwise of the therianthropic beliefs. Humans throughout history have accorded non-human animals differing degrees of status dependent on factors such as the non-human animal's perceived usefulness, attractiveness, and human-like characteristics (Bjerke, Ødegårdstuen & Kaltenborn, 1998; DeMello, 2012; Driscoll, 1995). Currently, felines and canines (the most common theriotypes in this study) can arguably possess such highly desirable characteristics, including being majestic, cute, loyal and courageous, (DeMello, 2012; Lynn, 2010) and this may enable those who have such non-human animals incorporated into their identity to more easily adjust to being a therian. Thus, for therians the acceptance of their therianthropy and theriotype may be impacted by the socially constructed status of the non-human animal and this may influence psychological wellbeing.

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Although further research is required to examine the above claims there is some support for therianthropy either having no effect or positively impacting on psychological wellbeing since in this study there were no differences between therians and non-therians in purpose in life, self-acceptance, and personal growth, and therians scored higher than non-therians on autonomy (although caution should be exercised when interpreting the result for autonomy given the confound with age, as discussed in the results section). Thus although therians may experience more difficulty in social relationships than non-therians a comparison of their scores on these four wellbeing scales indicated that therians have greater independence, are equally comfortable with themselves, and have similar levels of positive future planning and self-actualization as non-therians.

Furthermore, being a therian moderated the relationship between both autism and introverted anhedonia with autonomy. Whilst it would be predicted that both high levels on the AQ and introverted anhedonia would reduce levels of psychological wellbeing (Abbott & Byrne, 2012; Mohr & Claridge, 2015; van Heijst & Geurts, 2015), and this was found for non-therians, being a therian allowed those higher on these variables to maintain higher levels of autonomy. One explanation for this may lie in the significantly higher levels of unusual beliefs in the therian sample. More recently there has been a move away from labelling those with high levels of unusual experiences (positive schizotypy) as pathological and instead a move towards consideration of the healthy aspects of positive schizotypy. Research has found that participants do view their unusual beliefs, such as belief in extrasensory perception and miracles, as positive and useful and such beliefs enable them to gain a greater understanding of themselves and the world (Boden & Berenbaum, 2004). From this a model has been proposed that suggests that individuals high in positive schizotypy may be able to integrate their unusual experiences and beliefs in a more functional manner by developing an adaptive

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cognitive framework that provides an acceptable, non-distressing and coherent explanation for such beliefs (Mohr & Claridge, 2015).

There is also some evidence that low cognitive disorganization may also impact on Mohr and Claridge's (2015) model by increasing the individual's ability to develop a coherent framework (Mohr & Claridge, 2015; Schofield & Claridge, 2007). Within this study therians demonstrated no significant difference in cognitive disorganization and significantly higher levels of unusual experiences compared to non-therians. Grivell et al. (2014) found that therians tended to develop clear and complex belief frameworks around their therianthropy which ranged from biological to psychological to spiritual. Whilst schizotypy may impact on the development of therian beliefs, it can also be theorized that for therians being high on unusual experiences enables them to develop a coherent narrative around their cross species identity that facilitates their ability to resist social norms, evaluate themselves in relation to their own standards, and overall to be autonomous. Although therians were not statistically lower than non-therians on cognitive disorganization the fact that they did not score higher suggests that their levels of cognitive disorganization did not impede their construction of a positive framework for their beliefs. It should be noted that the moderating effect of being a therian only applied to autonomy and not to the other psychological wellbeing constructs, especially those related to social relationships. Abbot, Do and Byrne (2012) have suggested that lower wellbeing in those with high schizotypy scores may be in part explained by poorer social cognition and in particular impairments in emotional processing. Thus, being higher in imagination and unusual experiences may not be enough to overcome such difficulties in social cognition. Further research is required to investigate these relationships in more depth.

Limitations

Whilst this study provides some insight into the wellbeing and mental health of therians the representativeness of the sample to the therian population should be considered.

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Given the current paucity of research on the therian community it is not possible to know whether the participants in this study are characteristic of the therian community as a whole. Advertising for the study primarily occurred on online forums. Whilst attempts were made to also engage therians not involved in the online forums it is difficult to gauge the responsiveness of these communities. The therian sample was strongly skewed towards younger participants. The development of therianthropy over the lifetime has not been documented and so the experiences and perceptions of such a group may not be generalizable to older therians. Whilst previous unpublished surveys by therians suggest that predators such as wolves, dogs, and cats predominate in the therian community the very small numbers of prey animals in this sample may suggest that theriotypes were not wholly representative of those found in the therian community. As more studies are published under represented therians may be encouraged to engage in research and it may become clearer what constitutes a representative sample from the therian community.

Conclusion

Overall the findings suggest that therians are functioning well. This research suggests some problems in relations with other humans, which may be explained by the need to suppress from others their therian identity and associated behaviors (Grivell et al., 2014) and/or by cognitive differences similar to autistic individuals. However, being a therian appears to moderate the impact of features of negative schizotypy and autism on some aspects of wellbeing by constructing a coherent belief system around their therianthropic experiences that allows an acceptable integration of their human and non-human animal identities within a society that clearly delineates the two. Thus, this research encourages a move away from the pathologization of therianthropic beliefs, which may emerge from rigid constructions of what constitutes humanness, towards a more functional perspective on cross-

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2 species identities. Future research considering therian belief systems in a holistic and
3 functional way is required.
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17 i Theriotypes are “real” extinct or extant animals. However, the authors decided to include dragons
18 within this sample given that some individuals with dragon theriotypes identify more closely with “real”
19 animals rather than mythological animals. Given that what constitutes a therian identity is still being
20 developed within the community the authors did not feel it appropriate to exclude those dragons that
21 considered themselves to be therians.
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Table 2

Descriptive and Inferential Statistics for the Differences between Therian and Non-Therian Samples for the Measure of Schizotypy

	Therians			Non-Therians			<i>Z</i>	<i>p</i>	<i>r</i>	Median Diff	95% CI (Med Diff)	
	Median (Range)	95% CI (Med) Lower Upper		Median (Range)	95% CI (Med) Lower Upper						Lower	Upper
Unusual Experiences	0.500 (0.00-0.92)	.417	.583	0.250 (0.00-0.92)	.167	.250	-7.730	<.001	.398	.250	.167	.311
Introverted Anhedonia	0.400 (0.00-0.90)	.300	.500	0.200 (0.00-1.00)	.200	.200	-6.664	<.001	.343	.200	.100	.200
Impulsive Non-Conformity	0.400 (0.00-0.90)	.400	.500	0.300 (0.00-0.90)	.300	.400	-2.268	.023	.117	.100	.000	.100
Cognitive Disorganisation	0.545 (0.00-1.00)	.455	.636	0.545 (0.00-1.00)	.455	.545	-1.261	.207	.065	.000	.000	.091

Table 3**Common Mental Health Diagnoses According to Therian Status in Those Who Have Been Diagnosed with a Mental Illness.**

Mental health diagnosis	Percentage of participants with mental health diagnosis (Number of participants)	
	Therian (<i>N</i> = 45)	Non-therian (<i>N</i> = 42)
Depression	41.03 (16)	41.46 (17)
Anxiety	20.51 (8)	21.95 (9)
ADHD	15.38 (6)	0.00 (0)
Eating disorder	0.00 (0)	9.76 (4)
Autism	7.69 (3)	4.88 (2)
Bipolar	7.69 (3)	2.44 (1)
PTSD	5.13 (2)	2.44 (1)
Personality disorder	2.56 (1)	4.88 (2)
Tourettes	0.00 (0)	4.88 (2)
OCD	0.00 (0)	2.44 (1)
Undisclosed	15.38 (6)	7.32(3)

Table 4

Coefficients, Wald Statistics, Probability Values and Confidence Intervals for Each of the Predictor Variables.

	B	Wald	df	Sig.	Exp (B)	95% CI for EXP(B)	
						Lower	Upper
Unusual Experiences	-4.37	42.88	1	<.001	0.01	0.00	0.05
Cognitive Disorganization	2.65	15.39	1	<.001	14.11	3.76	52.95
Introverted Anhedonia	-2.16	8.77	1	.003	0.12	0.03	0.48
Impulsive Non-conformity	0.82	1.15	1	.284	2.28	0.51	10.28
Autism Quotient	-5.26	16.02	1	<.001	0.01	0.00	0.07
Constant	3.58	49.5	1	<.001	35.90		

Note. Model Summary: $\chi^2(5) = 110.098$, $p < .001$; $R^2 = .267$ (Cox & Snell), .377 (Nagelkerke)

Goodness of fit: $\chi^2 = 7.170$, $p = .518$ (Hosmer & Lemeshow).

Table 5

Descriptive and Inferential Statistics for the Differences Between Therian and Non-Therian Samples for the Measure of Wellbeing.

	Therians			Non-Therians			<i>Z</i>	<i>p</i>	<i>r</i>	Median Diff	95% CI (Med Diff)	
	Median (Range)	95% CI (Med) Lower Upper		Median (Range)	95% CI (Med) Lower Upper						Lower	Upper
Positive Relations	3.889 (1.78-6.00)	3.670	4.220	4.556 (1.78-6.00)	4.500	4.780	-5.675	<.001	.292	-0.667	-0.889	-0.444
Autonomy	4.833 (2.67-6.00)	4.667	5.11	4.333 (1.33-5.89)	4.111	4.333	-5.776	<.001	.298	0.556	0.333	0.778
Environmental Mastery	3.667 (1.44-5.78)	3.440	3.890	4.222 (1.56-6.00)	4.110	4.330	-4.537	<.001	.234	-0.444	-0.667	-0.333
Purpose in Life	4.444 (1.78-6.00)	4.220	4.780	4.667 (1.88-6.00)	4.560	4.780	-2.543	.011	-.131	-0.222	-0.444	-0.028
Self-Acceptance	4.444 (1.00-6.00)	4.110	4.670	4.333 (1.67-5.89)	4.220	4.440	-0.647	.517	.033	0.111	-0.111	0.333
Personal Growth	4.889 (2.00-5.89)	4.670	5.110	4.778 (2.33-6.00)	4.670	4.880	-0.884	.377	.046	0.111	-0.111	0.222

Table 6**Impact of Therianthropy and Autism on Levels of Autonomy**

	Unstandardised					95% CI for B	
	Coefficients						
	B	SE	β	<i>t</i>	<i>p</i>	Lower	Upper
Constant	4.78	0.87		54.77	<.001	4.61	4.95
Therian	-0.65	0.10	-.34	-6.33	<.001	-0.85	-0.45
Autism	-0.04	0.08	-.04	-0.49	.622	-0.19	0.11
Interaction	-0.27	0.10	-.23	-2.79	<.001	-0.46	-0.08

Table 7**Impact of Therianthropy and Introverted Anhedonia on Levels of Autonomy.**

	Unstandardised					95% CI for B	
	Coefficients						
	B	SE	β	t	p	Lower	Upper
Constant	4.76	0.09		54.36	<.001	4.59	4.93
Therian	-0.63	0.10	-0.33	-6.20	<.001	-0.84	-0.43
Introvert	-0.03	0.08	-0.03	0.35	.729	-0.18	0.13
Anhedonia							
Interaction	-0.25	0.10	-0.22	-2.54	.011	-0.44	-0.06

Figure 1: Interaction effect of therianthropy and autism on levels of autonomy.

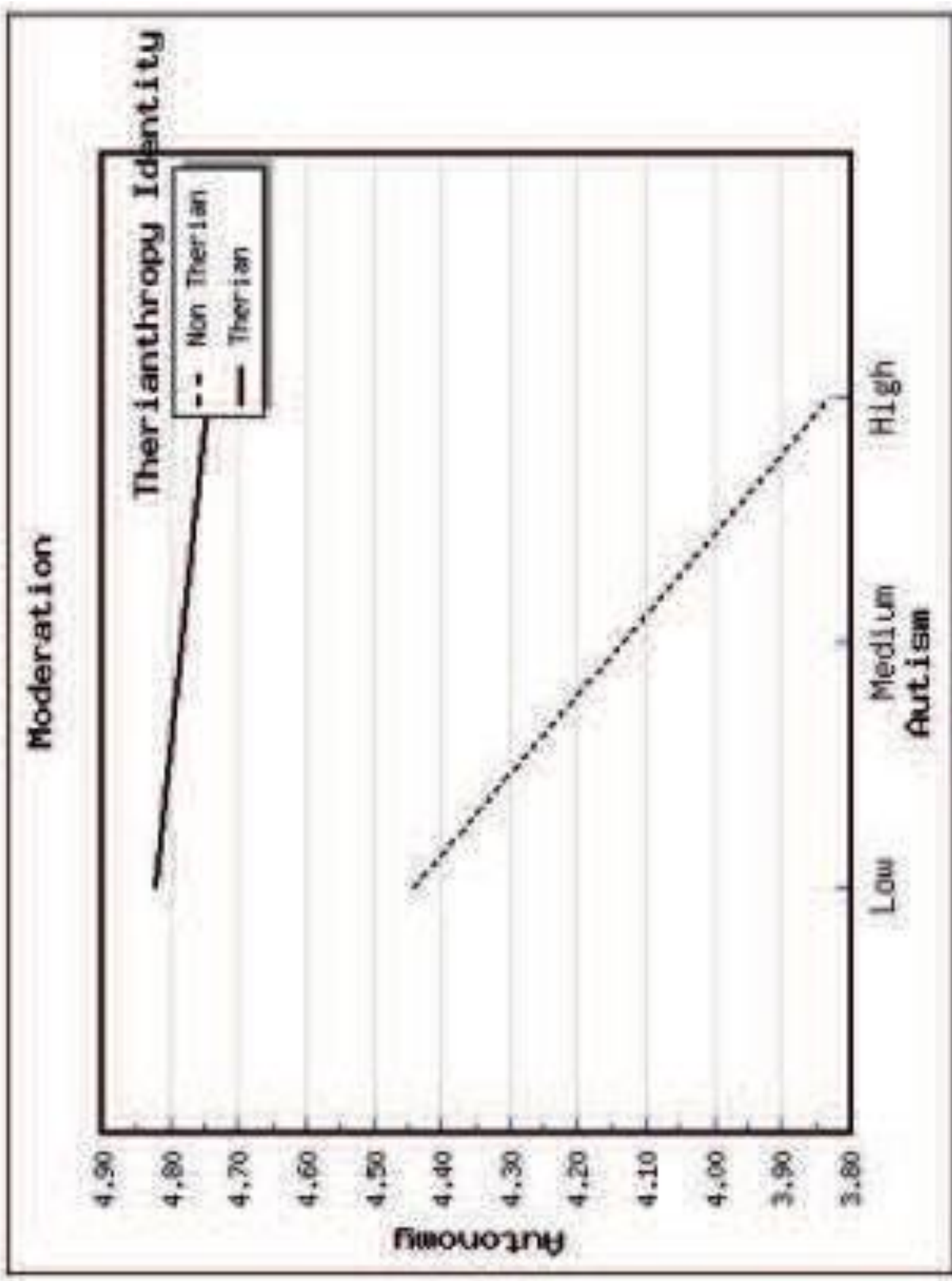


Figure 2: Interaction effect of therianthropy and introverted anhedonia on levels of autonomy.

