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Beliefs About Naturists Scale: A Standardised Measure of Personal Stigma Towards Naturists

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Abstract

The aim of this study was to fill in the gap in the existing literature when it comes to investigating stigma towards naturism and the individuals who engage in it by creating a psychometric instrument that considers both the experiences of naturists and the beliefs of non-naturists. This quantitative study was cross-sectional in its nature. For the first part of the study, a total of 151 participants participated. After data cleaning, the final sample size was 126. The participants were aged between 18 and 69. The participants were asked to report their gender, sexual orientation, and previous engagement in naturist activities. For the second part of the study, 347 participants completed the survey. The participants in this section were aged between 20 and 76 years old. An explorative principal axis factor analysis was conducted on the 34 items of the developed beliefs about naturists scale (BANS). The analysis indicated that the items loaded onto three factors, with a total of 46.686% of the variance explained, which broadly related to the attitudes, beliefs, and behaviour components of stigma. The first validation indicated that the BANS should be reduced to 29 items. The attitudes factor consisted of 13 items; the beliefs factor consisted of 10 items; and the behaviours factor consisted of six items. A further quantitative study was then carried out to re-evaluate the construct validity of the improved scale and to explore its concurrent validity. The revalidation of the BANS aimed to evaluate the concurrent validity, construct validity, and reliability of the scale. The correlation analysis indicated that the BANS has a high concurrent validity, as it was highly correlated with similar theoretical concepts and empirical predictors of stigma. Although more research is necessary to further evaluate the predictive validity, as well as the validity and reliability across different populations, this preliminary validation suggests a good concurrent and convergent validity, making this the most valid scale in existence to date when it comes to exploring the relationship between stigma and naturism.

Keywords: naturism; minority groups; stigma; attitudes; beliefs; behaviour; psychometric instrument

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1. Introduction

According to a recent survey, nearly 7 million individuals in the UK identify as naturists and frequently engage in naturist activities (Ipsos, 2022). Given the rise in the number of individuals who choose to engage in this behaviour and the negative representations of the behaviour on social media and in the press, it is important to have psychometric instruments that contribute to understanding of the societal beliefs and attitudes towards the

behaviour. Even though the anecdotal evidence suggests that individuals have stigmatising views towards the behaviour, validated psychometric instruments that focus specifically on measuring the beliefs towards naturism would facilitate the studying of it by providing the ability to collect data from larger groups of populations.

A qualitative exploration of the beliefs and experiences towards naturism in the existing literature suggests that, even though naturists experience a significant level of perceived stigma due to their naturist identity, non-naturists do not explicitly report high levels of personal stigma towards the behaviour (Soylemez et al., 2024). More specifically, non-naturists consider their naturist counterparts to be harmless individuals who have more positive body images. On the other hand, non-naturists appreciate the negative impact of engrained associations such as culture and religion on beliefs surrounding the behaviour. Furthermore, the findings highlight the importance of the group size and its impact on the social acceptance of the behaviour (Soylemez et al., 2024).

The rationale for creating the beliefs about naturists scale (BANS) was intentionally to create a psychometric instrument that considers both the experiences of naturists and the beliefs of non-naturists. By doing this, participants' voices and narratives from previously conducted qualitative research on the topic were represented when developing a quantitative instrument that can be used by researchers investigating stigma towards naturism and the individuals who engage in it (Soylemez et al., 2025).

The themes from the qualitative study suggest that there are specific beliefs that should be considered when investigating stigma towards naturism. For instance, naturist experiences suggest that their non-naturist counterparts might see their engagement in the behaviour as anti-social. Additionally, some participants who reflected on their engagement in naturism highlighted a violent response that they encountered from non-naturists. Even though many participants did not experience violence first-hand, the years of their engagement in naturism has led them to see their fellow naturists being exposed to stigma, violence, discrimination, and prejudice. Similarly, due to naturism involving being naked in the presence of other individuals, naturist participants highlighted their perceptions of their non-naturist counterparts by sharing that non-naturists (also known as textiles) see the behaviour as a "sexually dubious" one. Participants who identified as naturists shared that they were previously labelled as "swingers", "sexually loose individuals", and "promiscuous" people. As such, it was imperative to create a new psychometric instrument that reflects the experiences and beliefs surrounding naturism. During the creation process of the BANS, participants' voices from previously conducted qualitative research were taken into consideration by using words from their narratives.

2. Materials and Methods

The first iteration of the BANS included a total of 34 items used to measure perceptions towards naturists by asking participants to indicate how strongly they agree or disagree with each statement. The responses to each item were measured on a five-point scale (ranging from 1 = "strongly agree" to 5 = "strongly disagree"). Lower scores indicated more negative perceptions towards naturists. Items 6, 11, 15, 18, 21, 25, and 29 were reverse-scored.

2.1. Validation and Refinement of the BANS

Validity refers to how well the collected data cover the phenomena under investigation (Taherdoost, 2016). It is often defined as the extent to which an instrument measures what it is intended to measure in a quantitative study (Field, 2005; Heale & Twycross, 2015; Kimberlin & Winterstein, 2008). Several types of validity were explored during the validation process of the BANS.

2.1.1. Face Validity and Content Validity of the BANS

Face validity refers to the degree to which an instrument appears to be related to a specific construct (Taherdoost, 2016). It specifically relates to the judgment of experts and non-experts in the field, such as the test-takers. Furthermore, it helps evaluate an instrument in terms of its feasibility, its formatting, the language in which the items are written and their clarity, and the consistency of style (Oluwatayo, 2012). An instrument is considered to have face validity if the content is relevant to the participants. On the other hand, content validity is the degree to which an instrument is representative of the targeted construct that it aims to measure (Rusticus, 2014). Content validity involves evaluating items within a newly developed instrument to ensure that all the included items are essential and eliminating the undesirable ones (Boudreau et al., 2001).

Due to the fact that the items were created based on a qualitative exploration of the beliefs (Soylemez et al., 2024) and experiences towards naturism (Soylemez et al., 2023) from a pool of participants that included both naturists and non-naturists, and that the participants voices were taken into consideration from their narratives, the BANS can be considered as having a high face validity. Face validity has been previously criticised for being a weak form of validity (Taherdoost, 2016). As such, other validity processes were further carried out.

2.1.2. Construct Validity

Construct validity refers to how well a concept, an idea, or a behaviour that is a construct is translated into a functional reality (Taherdoost, 2016). To evaluate the BANS's construct validity and to refine the scale, an online quantitative study was conducted.

2.1.3. Participants

Participants were recruited for this element of the research using convenience and snowball sampling methods. A total number of 151 participants started the survey. After data cleaning, the final sample size was 126. The inclusion criteria were being over the age of 18 and being able to read in English.

The participants were aged between 18 and 69 (M = 38, SD = 12.83). A total of 45 participants (35.7%) reported their gender as male, 80 participants (63.5%) reported as female, and 1 participant (0.8%) reported as other. From the entire sample, 96 participants (76.2%) reported their sexual orientation as heterosexual, 18 participants (14.3%) as homosexual, and 10 participants (7.9%) as bisexual. Additionally, 1 participant (0.8%) reported their sexual orientation as other, and 1 participant (0.8%) reported that they preferred not to report their sexual orientation. A total of 26 participants (20.6%) reported that they had previously engaged in naturist activities, whereas 100 participants (79.4%) reported no previous engagement in naturism. Finally, 4 participants (3.2%) reported that they identified as naturists and 122 participants (96.8%) reported otherwise.

2.1.4. Procedures of the First Sub-Study of the BANS Validation

Once the study received ethical approval from The University of Northampton Social Sciences Research Ethics Committee (ETH:2223-0056), a survey link was shared with personal contacts and on online platforms, such as Facebook groups. Once participants accessed the survey link, they were provided with a participant information sheet and asked to give their consent to take part in this study. After obtaining consent, the participants were asked to complete the questionnaire. Once the survey was completed, the participants were presented with a debriefing form that explained the aims of the research and provided them with the contact information of the principal researcher and the supervisors and links to related organisations with which they could get in touch for further support if necessary.

The participants were asked to give permission for their data to be used once again prior to completing their participation.

3. Results

An exploratory factor analysis (EFA) is a procedure used to identify, organise, and reduce questionnaire items into a specific construct and is used to explore construct validity. A principal axis factor (PAF) EFA with varimax rotation was conducted using the IBM SPSS software, version 28, with the aim of identifying the factor structure underlying the data.

Since the current sample included only 126 participants, the sample size adequacy was evaluated using the Kaiser–Meyer–Olkin (KMO) test. The KMO measure of sampling adequacy is a statistical value that is used to decide whether a sample is sufficient to conduct a factor analysis. The KMO test was utilised in order to determine whether the data were likely to factor well. According to Kaiser (1974), the KMO statistic should be at least 0.600 to proceed with a factor analysis. The KMO statistic for the data was 0.903. Furthermore, the anti-image matrices indicated that the KMO statistic for variables on the diagonal were above the 0.500 cut-off, and those off the diagonal were sufficiently low. As such, the sample was adequate and factorable.

Bartlett's test of sphericity was utilised to establish whether there were relationships between the items that the factor analysis can further explore. The analysis indicated that the overall correlations were significantly different from zero (chi square (561) = 3415.260, $p < 0.001$), and therefore, a factor analysis was appropriate.

The rotated factor loading examination, utilising the Kaiser–Guttman criterion (Eigenvalue > 1), highlighted a cross-loading for a seven-factor solution. However, analysing the scree plots led to the decision of determining a three-factor solution to distinguish the underlying factors. Furthermore, the exploration of the three factors indicated that the factors aligned exceptionally well with the concepts of attitudes, beliefs, and behaviours, which are commonly explored within stigma (see the literature review in Section 1). Therefore, the three-factor solution was retained, and accounted for 46.686% of the variance. The three factors consisted of the *attitudes factor* (feelings; eigenvalue = 7.426), the *beliefs factor* (stereotypes; eigenvalue = 6.337), and the *behaviours factor* (discrimination; eigenvalue = 2.110).

The attitudes factor refers to the feelings that individuals hold towards those who engage in naturism. More specifically, the items that loaded onto this factor highlight the feelings of individuals. For instance, item 1 (people who engage in naturism are dangerous) suggests that individuals hold a negative feeling towards naturism. Additionally, the beliefs factor refers to the stereotyping perspectives of individuals towards those who engage in naturism. For instance, item 18 (it is okay to engage in naturism) highlights individuals' belief towards naturism. Finally, the items that loaded onto the behaviours factor highlight the behavioural aspect of stigma, referring to the discrimination that individuals who engage in naturism might experience. For instance, item 7 (it is acceptable to be violent towards naturists) suggests that naturists might experience discrimination by being exposed to violence. Table 1 presents the rotated matrix generated for all constructs. Given the sample size, variables with factor loadings above 0.512 were considered to make a significant contribution to a factor (Stevens, 2002).

Although the factor analysis indicated that the scale loaded onto three factors aligned with broader stigma conceptions, the correlation matrix indicated that there were two variables with a correlation above 0.80, which suggests singularity. Furthermore, there were few correlations below 0.30, suggesting that most items were sufficiently intercorrelated. However, the determinant was found to be exceptionally low ($R^2 < 0.00001$) and removing the strongly correlated or the exceptionally weakly correlated items did not

improve the determinant. As such, those items with high or low levels of correlation need further attention.

Table 1. Rotated factor matrix.

Factors / Item	Attitudes	Beliefs	Behaviours
19. People who engage in naturism deserve to be treated with violence.	0.836		
7. It is acceptable to be violent towards naturists.	0.824		
12. People who engage in naturism deserve to lose their jobs.	0.779	0.337	
17. People who engage in naturism are sexual predators.	0.726		0.365
3. People who engage in naturism are paedophiles.	0.725		0.364
4. People who engage in naturism are disgusting.	0.678	0.319	0.303
13. Engaging in naturism is a very wrong thing to do.	0.639	0.593	
15. People who engage in naturism deserve to be treated with respect just like any other member of the society.	−0.630	−0.477	
8. Individuals who engage in naturism should be disciplined.	0.619		
5. It is fair to exclude individuals who engage in naturism from the society.	0.604	0.436	
1. People who engage in naturism are dangerous.	0.511		
2. People who identify as naturists are perverts.	0.489	0.488	0.337
20. There is a place and time to engage in naturism.	−0.465		
18. It is okay to engage in naturism.	−0.424	−0.751	
29. I find naturism acceptable.	−0.322	−0.741	
21. Being a naturist is normal.		−0.668	
10. Naturism is an anti-social behaviour.	0.421	0.640	
22. People who engage in naturism are disrespectful.	0.513	0.629	
25. I would feel comfortable around naturists (i.e., at a naturist beach or naturist event).		−0.628	
28. Engaging in naturism is pointless.		0.584	
30. Practicing naturism in conservative countries (i.e., Turkey) is disrespectful.			
23. People who engage in naturism are attention-seekers.		0.522	
27. Engaging in naturism in public places is not okay/acceptable.		0.518	
9. Naturism is a sexually dubious behaviour.	0.512	0.516	
31. Practicing naturism in countries with more conservative religions (i.e., Islam) is disrespectful.			
33. People who engage in naturism are comfortable in their skin.			
26. People who engage in naturism are promiscuous people.		0.319	0.649
24. Individuals who engage in naturism are sexually loose.		0.399	0.595
14. People who are naturists are swingers.	0.344	0.314	0.545
32. Individuals who engage in naturism try not to be recognised by other members of the society.			0.315
11. People who engage in naturism are harmless individuals.			
6. Naturism has nothing to do with sex.			
16. Naturism is sexual.	0.321	0.511	
34. People who are naturists have a positive body image of themselves.			

There were seven items that did not load onto the three factors. This suggests that the individual items should be further scrutinised to optimise the scale. To this end, the communalities were explored to assess how well each variable was explained by the three-factor structure. Table 2 reports the communalities for each item. Due to the sample size of 126 participants, the cut-off point was 0.500 (MacCallum et al., 1999). As such, items that loaded below 0.500 had a low level of communication and warrant further attention. These items are highlighted in Table 2.

Table 2. Communalities.

Items	Initial	Extraction
1. People who engage in naturism are dangerous.	0.581	**0.488**
2. People who identify as naturists are perverts.	0.828	0.775
3. People who engage in naturism are paedophiles.	0.864	0.787
4. People who engage in naturism are disgusting.	0.786	0.712
5. It is fair to exclude individuals who engage in naturism from the society.	0.734	0.643
6. Naturism has nothing to do with sex.	0.536	0.511
7. It is acceptable to be violent towards naturists.	0.813	0.722
8. Individuals who engage in naturism should be disciplined.	0.677	0.614
9. Naturism is a sexually dubious behaviour.	0.812	0.777
10. Naturism is an anti-social behaviour.	0.758	0.659
11. People who engage in naturism are harmless individuals.	0.476	**0.423**
12. People who engage in naturism deserve to lose their jobs.	0.833	0.804
13. Engaging in naturism is a very wrong thing to do.	0.839	0.807
14. People who are naturists are swingers.	0.681	0.589
15. People who engage in naturism deserve to be treated with respect just like any other member of the society.	0.750	0.709
16. Naturism is sexual.	0.703	0.698
17. People who engage in naturism are sexual predators.	0.840	0.785
18. It is okay to engage in naturism.	0.842	0.823
19. People who engage in naturism deserve to be treated with violence.	0.826	0.751
20. There is a place and time to engage in naturism.	0.514	**0.422**
21. Being a naturist is normal.	0.612	0.555
22. People who engage in naturism are disrespectful.	0.829	0.769
23. People who engage in naturism are attention-seekers.	0.671	0.619
24. Individuals who engage in naturism are sexually loose.	0.657	0.638
25. I would feel comfortable around naturists (i.e., at a naturist beach or naturist event).	0.590	**0.438**
26. People who engage in naturism are promiscuous people.	0.677	0.681
27. Engaging in naturism in public places is not okay/acceptable.	0.510	**0.401**
28. Engaging in naturism is pointless.	0.645	0.490
29. I find naturism acceptable.	0.742	0.691
30. Practicing naturism in conservative countries (i.e., Turkey) is disrespectful.	0.854	0.859
31. Practicing naturism in countries with more conservative religions (i.e., Islam) is disrespectful.	0.855	0.905
32. Individuals who engage in naturism try not to be recognised by other members of the society.	0.395	**0.197**
33. People who engage in naturism are comfortable in their skin.	0.699	0.928
34. People who are naturists have a positive body-image of themselves.	0.615	**0.488**

Extraction method: principal axis factoring.

3.1. BANS Construct Validity

An explorative principal axis factor analysis was conducted on the 34 items of the developed BANS. The analysis indicated that the items loaded onto three factors, with a total of 46.686% of the variance explained, which broadly relates to the attitudes, beliefs, and behaviour components of stigma. However, there were a number of items that did not load onto any of the factors, loaded onto different factors than expected, identified as having low commonalities, or potentially suggested singularities. Although these items may have statistical reasons for being moved or removed, they need further discussion to ensure that their removal does not result in conceptual loss and aligns with the qualitative findings, to preserve the face and content validity.

The factor analysis indicated that items 18, 30, 31, and 32 did not strongly load on any of the three factors. A closer evaluation of these items revealed that items 30 (practicing naturism in conservative countries (i.e., Turkey) is disrespectful), 31 (practicing

naturism in countries with more conservative religions (i.e., Islam) is disrespectful), and 32 (individuals who engage in naturism try not to be recognised by other members of the society) conceptually overlapped with item 22 (people who engage in naturism are disrespectful), as item 22 already highlights disrespectful attitudes towards naturists. All four items refer to engrained beliefs (culture and religion). Furthermore, item 11 (people who engage in naturism are harmless individuals) conceptually overlapped with item 18 (it is okay to engage in naturism). As such, removing these items would statistically help optimise the scale without impacting the face and content validity.

The rotated component matrix indicated that item 11 (people who engage in naturism are harmless individuals) did not load onto any factors. Furthermore, removing the items did not conceptually detract from the scale, as other items (e.g., item 18: it is okay to engage in naturism) explore these themes. As such, this item was removed from the final scale.

3.2. Attitudes

The factor loadings labelled as attitudes contained 20 items and included statements related to feelings towards individuals who engage in naturism. The factor analysis indicated that items 18, 20, and 23 should not be included in the attitudes factor due to low factor loading. However, these were retained here to preserve the face and content validity. During the qualitative exploration of experiences and beliefs towards naturism, the participants' narratives highlighted how they felt about the behaviour and the individuals who engage in it. For example, some narratives highlighted that individuals who engage in naturism are considered disgusting. The existence of disgust in the narratives highlights the negative feelings towards naturists, which is encompassed by such items as 4 (people who engage in naturism are disgusting) in the measure to test for this feeling quantitatively. Similarly, the qualitative findings suggest that individuals find engaging in naturism as an acceptable behaviour, reflecting their overall feelings. Thus, item 18 (it is okay to engage in naturism) was retained within the attitudes factor of the instrument. On the other hand, some participants' narratives also reflected more conservative feelings towards the behaviour, suggesting that engagement in naturism might be acceptable depending on where and when it is practiced. Thus, item 20 (there is a place and time to engage in naturism) was retained within the attitudes factor. In order to further investigate an individual's general feelings regarding the behaviour of naturism, item 23 (I would feel comfortable around naturists, i.e., at a naturist beach or naturist event) was retained. During the item writing stage of the BANS, participants' words from the qualitative study were utilised in order to accurately represent their voices; as such, removing these items due to statistical efficiency would compromise the face and content validity of the scale.

The correlation matrix suggested that item 3 (people who engage in naturism are paedophiles) had potential singularity with item 17 (people who engage in naturism are sexual predators). Furthermore, the rotated component matrix indicated that item 3 cross-loaded onto the beliefs factor. Finally, when exploring the qualitative value of the items, paedophiles (item 3) can be considered as a type of sexual predator (item 17). As such, item 3 was removed from the scale.

Interestingly, the factor analysis indicated that items 10 (naturism is an anti-social behaviour) and 22 (people who engage in naturism are disrespectful) loaded more strongly on the belief factor. However, conceptually, these items reflect attitudes more accurately rather than beliefs. In addition, these items cross-loaded onto attitudes. As such, these items were retained under the attitudes factor.

Finally, items 33 (people who engage in naturism are comfortable in their skin) and 34 (people who are naturists have a positive body-image of themselves) did not load under any factors. However, due to these statements representing a theme that emerged in the

qualitative data, it was decided to keep these for the next phase of analysis. Even though items 33 and 34 did not load under any of the factors, these could be grouped under the attitudes factor due to representing the feelings of individuals regarding those who engage in the behaviour of naturism.

A total of 20 items from the original BANS were identified by the factor analysis as being associated with attitudes. The analysis also suggested that seven items within this factor required further attention and could be removed to improve the construct validity. Following careful consideration to ensure that the removal of these items does not impact the face and content validity, two items were removed from the scale and four items were added to the attitudes factor. As such, the final attitude factor included 13 items.

3.3. Beliefs

The factor labelled as beliefs, with 10 items, included statements related to stereotyping individuals who engage in the behaviour of naturism. The factor analysis indicated that items 1, 2, 6, and 26 should not be included in the beliefs factor due to low factor loading. However, these were retained here to preserve the face and content validity. The qualitative findings highlight that there are stereotypical beliefs towards the behaviour of naturism and individuals who engage in the behaviour. Item 18 (it is okay to engage in naturism) is a prime example of such a belief. However, some participants who identified as naturists highlighted that they have been labelled as dangerous individuals. Additionally, a participant shared their experience of being called a pervert for their engagement in naturism. These experiences are directly explored by items 1 (people who engage in naturism are dangerous) and 2 (people who identify as naturists are perverts), suggesting that they must be retained. Another common theme that emerged in the data amongst the non-naturists was that, even though they did not have an in-depth understanding of the behaviour, they had a clear understanding that engaging in naturism was not at all linked to any sexual stimulation, which is directly evaluated by item 6 (naturism has nothing to do with sex). This item reflects non-naturists' belief towards the behaviour, as it touches on a common stereotype associated with individuals who choose to participate in nudity amongst others. However, it is important to acknowledge the previous research on the topic of naturism in relation to sexuality. For instance, Smith and King (2009) highlight that some individuals who choose to engage in naturism might use the opportunity to explore aspects of their sexuality that are considered to be taboos. As such, the item in relation to sexuality and naturism does not represent a universal truth, but is based on the narratives of the interviewees who took part in the study. On the other hand, some stereotyping beliefs were also present in the narratives of the participants during the qualitative exploration of the topic. For instance, some participants shared that individuals who choose to engage in naturism might be promiscuous, which is directly evaluated by item 26 (people who engage in naturism are promiscuous) of the scale. Since removing these items would compromise the face and content validity of the scale, they were retained in the scale.

3.4. Behaviour

The third factor included six items that shared the theme of discrimination. These items are statements that are closely linked to active discrimination towards naturists by others, such as social exclusion (i.e., it is fair to exclude individuals who engage in naturism from the society), violent behaviour (i.e., it is acceptable to be violent towards naturists), and job loss (i.e., people who engage in naturism deserve to lose their jobs) due to an individual identifying as a naturist. The factor analysis indicated that items 5, 7, 8, and 12 loaded more strongly on the attitudes factor. However, these items conceptually reflect behaviour. When taking a look at the items, it is clear to see that each one of these

relates to the behavioural aspect of stigma and, from a conceptual perspective, leaving these items under the behaviour factor is appropriate. The qualitative findings of this topic highlight that discrimination was present amongst the narratives of the participants (Soylemez et al., 2023). For instance, some participants reflected on the discrimination they experienced when attending naturist events. More specifically, a participant highlighted that revealing their naturist identity at the workplace led to a meeting with higher-ups, which triggered a discussion regarding how the individual would be disciplined for their naturist engagement. This is directly evaluated by item 8 (individuals who engage in naturism should be disciplined). Furthermore, due to the nature of discrimination having behavioural consequences on individuals, items 5 (it is fair to exclude individuals who engage in naturism from the society), 7 (it is acceptable to be violent towards naturists), 12 (people who engage in naturism deserve to lose their jobs), and 17 (people who engage in naturism are sexual predators) were retained within the behaviour factor. The final factor of behaviours consisted of six statements. A further exploration of the items suggested that these six were a good representation of the concept and no items needed to be removed or discussed.

4. Discussion

4.1. Discussion and Conclusions from First Validation of the BANS

The first validation study indicated that the BANS should be reduced to 29 items that load onto the three factors of attitudes, beliefs, and behaviours. The attitudes factor consisted of 13 items, the beliefs factor consisted of 10 items, and the behaviours factor consisted of 6 items.

The behaviours factor consisted of the lowest number of items. However, this is reflective of the qualitative data, whereby participants emphasised attitudes and beliefs rather than behaviours. Additionally, the qualitative exploration towards the behaviour of naturism suggests that individuals do not hold great levels of discriminating beliefs towards the behaviour or the individuals who engage in it. The emergence of discrimination in the qualitative data was very subtle due to few of the interviewees having experienced discrimination for their naturist identity.

Although the improved 29-item BANS had a good face and content validity, the construct required further testing. In addition, the concurrent validity and reliability of the BANS needed exploring.

4.2. Reliability, Construct, and Concurrent Validity of the Improved BANS

The first explorative analysis conducted on the 34-item beliefs about naturists scale suggested that the scale should be reduced to 29 items and that these items loaded onto three factors: attitudes, beliefs, and behaviours. A further quantitative study was then carried out to re-evaluate the construct validity of the improved scale and to explore the concurrent validity of the scale.

Concurrent Validity

Concurrent validity refers to the degree to which two separate measures of constructs that should be theoretically related are, in fact, related (Taherdoost, 2016). As reminded by this chapter, there are currently no existing validated scales that measure stigma towards naturism. As such, the naturism stigma scale (NSS, adapted from the depression stigma scale) was utilised as the best measure to be conceptually and theoretically related to the BANS (Soylemez et al., 2025). However, as the NSS has some limitations and the DSS was not developed to specifically measure naturism, it is only a proxy for the concept; a common predictor of all common stigmas was included in the current study.

Right-wing authoritarianism (RWA) and conservative political attitudes have previously been suggested in the literature as factors that can predict the levels of stigma (DeLuca et al., 2022). A number of previous studies conducted in the US suggest that supporting liberal political views leads to reduced endorsements of mental health stigma (DeLuca & Yanos, 2016; DeLuca et al., 2018). For instance, in a study that investigated the relationship between mental health stigma and RWA, the findings suggested that there was a significant association between RWA beliefs and stereotyping, a desire for social distance, and microaggressions towards individuals with mental health issues (Gonzales, 2022).

RWA is characterised by an individual's tendency to be submissive towards authorities, their willingness to adhere to traditional values, and their aggressive response to members of the outgroups (Altemeyer, 2006). Existing studies that have explored the relation between authoritarianism and stigma, such as Furr et al. (2003), Sibley and Duckitt (2008), and Waitz-Kudla et al. (2019), have found that RWA is a significant and robust predictor of stigma towards outgroups. As such, the right wing authoritarianism scale (RWAS) short form was utilised in order to test whether more conservative political views and higher levels of authoritarianism predicted higher levels of personal stigma towards naturists.

The right-wing authoritarianism scale short form (RWAS, Rattazzi et al., 2007) is a commonly used and widely validated scale that evaluates RWA and conservative political attitudes (Rattazzi et al., 2007). The RWAS includes 14 items, such as the following: *Obedience and respect for authority are the most important values children should learn. There is absolutely nothing wrong with nudist camps. People should pay less attention to the Church and the Pope and instead develop their own personal standards of what is moral and immoral*. The items are rated on a 7-point Likert scale with answers the range between totally disagree (=0) and totally agree (=7). The answers across the items are summed, with higher scores indicating higher RWA endorsement. The RWAS has been found to be a reliable instrument, with a Cronbach's alpha of 0.77 (Rattazzi et al., 2007).

4.3. Participants

The initial number of the sample was 400 participants. However, 53 participants were removed due to systematically missing data. The final sample of individuals who completed the entire survey consisted of 347 participants. The inclusion criteria to take part in the research were being over the age of 18 and being able to speak English fluently.

The participants were aged between 20 and 76 years old (M = 41, SD = 11.54). A total of 197 participants (56.8%) reported being male, 148 participants (42.7%) reported being female, and 2 participants (0.6%) preferred not to state their gender. Out of the entire sample, 246 participants (70.9%) self-identified as heterosexuals, 30 participants (8.6%) self-identified as homosexual, and 67 participants (19.3%) self-identified as bisexuals. Additionally, three participants (0.9%) reported "other" as their gender and one participant (0.3%) preferred not to share their sexual orientation.

From the entire sample, 153 participants (44.1%) reported that they had previously engaged in naturism (naturist events, naturist beaches), whereas 194 (55.9%) reported not having previously engaged in any kind of naturist activities. Furthermore, 121 participants (34.9%) reported that they identified as a naturist and engaged in naturist activities on a regular basis, whereas 226 participants (65.1%) reported that they neither identified as naturists nor engaged in naturism on a regular basis.

4.4. Procedures

After ethical approval had been gained for this study (ETH: 2223-0128), participants were recruited through the use of Amazon Mechanical Turk (MTurk) to allow access to a wider range of participants and to facilitate a diverse sample. Each participant was

reimbursed GBP 0.20 for their participation. Participants who chose to engage with the study were provided with a participant information sheet and a consent form prior to being given access to the questionnaires. Once the participants completed the questionnaires, they were provided with a debrief form. At the end of the survey, each participant was provided with a unique survey completion code on Qualtrics, which was then entered onto Amazon MTurk for reimbursement.

4.5. Results from the Improved BANS

A principal axis factor (PAF) analysis of the 29 Likert scale questions from the BANS was conducted using varimax rotation with the data from the 347 participants.

The adequacy of the sample size was tested by using the Kaiser–Meyer–Olkin (KMO) test. The KMO value for the sample of 347 participants was 0.965, which is above the suggested cut-off of 0.600 (Kaiser, 1974). Furthermore, the anti-image matrices indicated that the KMO values for variables on the diagonal were above the 0.50 cut-off point. As such, the sample was factorable and adequate.

In order to establish the relationship between the items, Bartlett's test of sphericity was utilised. The analysis indicated that the overall correlations were significantly different from zero (chi square (406), 10,297.129 = $p < 0.001$), and therefore, a factor analysis was deemed appropriate.

The rotated factor loadings were examined by utilising the Kaiser–Guttman criterion (eigenvalue > 1). The rotated matrix factor highlighted a cross-loading for a three-factor solution. The scree-plot analysis also confirmed the three-factor solution to distinguish the underlying factors, which presented consistency with the previous validation. As such, the three-factor solution was retained (including attitudes, beliefs, and behaviours) and there were no items that were not loaded onto any factors (see Table 3).

Table 3. Rotated factor matrix.

Items	Attitudes	Beliefs	Behaviours
2. People who identify as naturists are perverts.	0.925		
3. People who engage in naturism are disgusting.	0.897		
8. Naturism is a sexually dubious behaviour.	0.885		
15. People who engage in naturism are sexual predators.	0.884		
11. Engaging in naturism is a very wrong thing to do.	0.883		
20. People who engage in naturism are disrespectful.	0.874		
12. People who are naturists are swingers.	0.872		
1. People who engage in naturism are dangerous.	0.871		
10. People who engage in naturism deserve to lose their jobs.	0.863		
4. It is fair to exclude individuals who engage in naturism from the society.	0.850		
24. People who engage in naturism are promiscuous people.	0.849		
22. Individuals who engage in naturism are sexually loose.	0.846		
9. Naturism is an anti-social behaviour.	0.843		
17. People who engage in naturism deserve to be treated with violence.	0.833		−0.367
6. It is acceptable to be violent towards naturists.	0.833		−0.361
7. Individuals who engage in naturism should be disciplined.	0.822		
14. Naturism is sexual.	0.793		
26. Engaging in naturism is pointless.	0.786		
21. People who engage in naturism are attention-seekers.	0.778		
25. Engaging in naturism in public places is not okay/acceptable.	0.564		0.343
27. I find naturism acceptable.		0.832	
16. It is okay to engage in naturism.		0.732	
19. Being a naturist is normal.		0.705	0.357
28. People who engage in naturism are comfortable in their skin.		0.705	−0.331

Table 3. *Cont.*

Items	Attitudes	Beliefs	Behaviours
23. I would feel comfortable around naturists (i.e., at a naturist beach or naturist event).		0.659	0.399
29. People who are naturists have a positive body-image of themselves.		0.652	
13. People who engage in naturism deserve to be treated with respect just like any other member of the society.		0.650	
5. Naturism has nothing to do with sex.		0.525	
18. There is a place and time to engage in naturism.		−0.522	

However, the correlation matrix highlighted that there were a number of intercorrelations that were exceptionally weak (<0.30) or strong (>0.80). Consequently, the determinant was found to be exceptionally weak ($R^2 < 0.00001$) and removing the exceptionally weak correlation did not improve the determinant.

Table 4 reports the communalities for each item. Since the current sample included 347 participants, communalities below 0.500 suggest that the items do not relate to any of the factors (MacCallum et al., 1999).

Table 4. Communalities.

Items	Initial	Extraction
1. People who engage in naturism are dangerous.	0.833	0.780
2. People who identify as naturists are perverts.	0.869	0.860
3. People who engage in naturism are disgusting.	0.847	0.828
4. It is fair to exclude individuals who engage in naturism from the society.	0.759	0.728
5. Naturism has nothing to do with sex.	0.391	**0.305**
6. It is acceptable to be violent towards naturists.	0.852	0.835
7. Individuals who engage in naturism should be disciplined.	0.747	0.718
8. Naturism is a sexually dubious behaviour.	0.831	0.809
9. Naturism is an anti-social behaviour.	0.765	0.724
10. People who engage in naturism deserve to lose their jobs.	0.859	0.820
11. Engaging in naturism is a very wrong thing to do.	0.843	0.813
12. People who are naturists are swingers.	0.790	0.770
13. People who engage in naturism deserve to be treated with respect just like any other member of the society.	0.490	**0.483**
14. Naturism is sexual.	0.732	0.657
15. People who engage in naturism are sexual predators.	0.821	0.807
16. It is okay to engage in naturism.	0.578	0.585
17. People who engage in naturism deserve to be treated with violence.	0.851	0.833
18. There is a place and time to engage in naturism.	0.347	**0.301**
19. Being a naturist is normal.	0.591	0.625
20. People who engage in naturism are disrespectful.	0.800	0.784
21. People who engage in naturism are attention-seekers.	0.687	0.658
22. Individuals who engage in naturism are sexually loose.	0.796	0.751
23. I would feel comfortable around naturists (i.e., at a naturist beach or naturist event).	0.584	0.594
24. People who engage in naturism are promiscuous people.	0.788	0.744
25. Engaging in naturism in public places is not okay/acceptable.	0.443	**0.441**
26. Engaging in naturism is pointless.	0.714	0.706
27. I find naturism acceptable.	0.713	0.751
28. People who engage in naturism are comfortable in their skin.	0.598	0.632
29. People who are naturists have a positive body-image of themselves.	0.519	**0.493**

Extraction method: principal axis factoring.

The factor analysis confirmed the three factors, the low determinant, and numerous low commonalities. Furthermore, the analysis suggested that the factors were too intercorrelated to be split into the individual components of attitudes, beliefs, and behaviours.

4.5.1. Reliability Analyses

Reliability analyses were conducted to test the reliability in the current study of the NSS, RWA, and BANS. The analyses suggested that all three scales have a high reliability. The findings indicated that the BANS does not intersect with the factor analysis. More specifically, the NSS's Cronbach's alpha for personal stigma in this study was 0.960 ($\alpha = 0.96$); for perceived stigma, it was 0.935 ($\alpha = 0.93$); and the RWA Cronbach's alpha was 0.805 ($\alpha = 0.80$). Finally, the BANS reliability was also high, with a Cronbach's alpha of 0.965 ($\alpha = 0.96$), suggesting that the scale has a good stability, which increases the reliability and validity of the scale (Dolnicar et al., 2022) when used as a measure of stigma toward naturism.

4.5.2. Correlation Analyses

A correlation analysis was conducted to test the concurrent validity of the BANS. As anticipated, the correlation analyses suggested that the BANS has a significant correlation with the RWA ($r = -0.535$, $p = < 0.001$), perceived stigma ($r = -0.525$, $p = < 0.001$) and personal stigma ($r = -0.834$, $p = < 0.001$). The BANS was developed to measure the stigmatising perceptions of the public towards naturism. As such, the higher correlation of the BANS with personal stigma suggests a high construct validity.

4.6. Conclusions from the Revalidation of the BANS

The revalidation of the BANS aimed to evaluate the concurrent validity, construct validity, and reliability of the scale. The correlation analysis indicated that the BANS has a high concurrent validity, as it was highly correlated with similar theoretical concepts and empirical predictors of stigma. Furthermore, the BANS showed a high reliability ($\alpha = 0.96$) in the current study. Finally, the factor analysis indicated that the scale loads onto the three factors that underly stigma (attitudes, belief, and behaviours).

4.7. Overall Discussion

A review of the literature on scales for measuring stigma revealed no available scales. Although more generalised scales of stigma could be adapted and show a high reliability (NSS; Soylemez et al., 2025), these did not meet the face and content validity requirements. As such, a new scale was developed (BANS) to better encompass the experiences expressed through the interviews of both those who engage in naturist behaviour (perceived stigma) and those who do not (personal stigma). Further research was then conducted to validate, improve, and revalidate the BANS. The final BANS includes 29-items and shows a good reliability and concurrent validity. Although the scale touches on the underlying factors of the perceptions, beliefs, and behaviours associated with stigma, this scale cannot be split into these subscales and should therefore be used in its entirety.

The present study identified a lack of scales that specifically focus on naturism. Additionally, it referred to the adaptation of an existing validated scale from the literature (development of the naturism stigma scale; NSS). However, the NSS does not incorporate the real-life lived experiences of individuals identified through the qualitative interviews. This results in a low face and content validity for the scale. This outcome led to the creation and validation of a further instrument—the beliefs about naturists scale (BANS). Although more research is necessary to further evaluate the predictive validity, as well as the validity and reliability across different populations, this preliminary validation suggests a good concurrent and convergent validity, making this the most valid scale in existence to date.

The first step to conducting further research should be to focus on the effects and influence of religion in regard to the personal and perceived stigma around engaging in this behaviour. Religious factors often play an important role in our perceptions of events and behaviours; thus, future research might benefit if religion and the religious differences were controlled for. Additionally, the present study did not take cultural differences into consideration. As culture and cultural differences are important factors when it comes to understanding the perception of individuals towards themselves and others who engage in certain behaviours, the effects of culture and cultural differences across the countries of the participants should be taken into consideration.

There are many factors (age, sexual orientation, culture, religions, gender) that might influence the attitudes towards the behaviour of engaging in naturism. The ability to recruit participants from a wider demographic background would help contribute to the understanding of attitudes towards naturism. Additionally, as the research on stigma towards naturism and engaging in this behaviour is under-researched, it might be beneficial to conduct cross-cultural studies that recruit a bigger sample size to shed light on understanding this topic further. Furthermore, more subtle and implicit stigma towards naturists could be measured by conducting implicit association tests and experimental studies to further explore the perceptions surrounding this behaviour.

5. Conclusions

The gap in investigating the personal and perceived stigma towards naturism can now be filled by utilising the validated beliefs about naturists scale to collect quantitative data on the topic. Additionally, the newly created instrument can be translated, utilised, validated across different samples and communities to improve our understanding of the stigma towards naturism. As such, the newly created scale can be utilised to test the applicability of the generated themes on a wider population. Furthermore, conducting longitudinal research studies may help shed light on understanding the current research topic under investigation, especially when it comes to understanding the importance of the intergroup contact hypothesis regarding naturism.

Previous research has highlighted the benefits of engaging in naturism on positive body image perception, self-esteem, and overall life satisfaction (West, 2018). As such, engaging in non-sexual nudity amongst others and being exposed to non-idealised bodies can significantly contribute to one's overall satisfaction and body acceptance. Even though other factors might influence the relationship between naturism and its reported benefits, these empirical studies should be taken into consideration when investigating the positive changes that arise from the simple act of taking one's clothes off. Given the prevalence of body image issues, depression, and anxiety, naturism could further be explored in relation to its benefits on these areas to improve both the physical and mental health of individuals.

Finally, due to the fact that naturism involves individuals being present amongst others in a naked body, it might be interesting to contribute to the literature by further investigating the presence of eating disorders amongst individuals who engage in naturist behaviour. There is a vast literature on eating disorders; however, there are not many existing empirical research studies that have explored the possible relationship between the behaviour of engaging in naturism and eating disorders. As such, further research could be conducted.

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