CASE STUDY

Cognitive behavioural therapy including habit reversal training for treating dermatillomania in the context of anxiety and low mood

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Abstract

Dermatillomania is characterised by repetitive skin picking, resulting in tissue damage and significant distress and/or functional impairment. Cognitive behavioural therapy (CBT) is the recommended psychological intervention for dermatillomania in clinical guidelines, with the evidence base also supporting habit reversal training (HRT) as part of CBT. However, research evaluating CBT and HRT for dermatillomania remains scarce. This case study describes a young woman with dermatillomania, in the context of co-morbid anxiety and low mood, treated with 20 sessions of CBT including HRT in a community setting. Guided by her formulation, additional techniques such as those fostering self-compassion were also integrated, and sociocultural factors were adapted for. Improvements were reported in client-centred goals and outcomes of global psychological distress, functioning, anxiety and symptoms and psychosocial impacts of skin picking. The intervention was well received by the client. Limitations as well as clinical practice implications and research recommendations for dermatillomania are discussed.

Key learning aims

(1) To understand using CBT, including HRT, to treat a case of dermatillomania in the context of anxiety and depression.
(2) To use a formulation-driven approach to guide the intervention.
(3) To consider adapting interventions for sociocultural factors.

Keywords: Cognitive behavioural therapy; Dermatillomania; Habit reversal training; Skin picking

Introduction

Dermatillomania, also termed skin picking or excoriation disorder, is characterised by recurrent, compulsive skin picking (American Psychiatric Association, 2013). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association, 2013) classifies dermatillomania under obsessive compulsive and related disorders, alongside trichotillomania (hair pulling disorder) and other body-focused repetitive behaviours (BFRBs) such as nail biting. The DSM-5 (American Psychiatric Association, 2013) outlines the following diagnostic criteria for dermatillomania: (a) recurrent skin picking resulting in skin lesions, (b) repeated attempts to decrease/stop skin picking and (c) the skin picking causes clinically significant distress or impairment in important areas of functioning (e.g. social and/or

occupational). The skin picking must not be attributable to physiological effects of a substance or another medical condition, or better explained by another mental health condition.

Dermatillomania can develop at any age, but typical onset is during adolescence between 13 and 15 years old (Lochner *et al.*, 2017; Wabnegger and Schienle, 2019). Dermatillomania has an estimated prevalence rate of 1.4–5.4% (Hayes *et al.*, 2009; Keuthen *et al.*, 2010; Machado *et al.*, 2018). Skin picking may begin following a skin condition (e.g. acne or eczema) and become more ritualistic and habitual as a way of regulating emotional states such as anxiety (Bewley, 2021; Roberts *et al.*, 2013). Preceding skin picking episodes, a range of potential triggers have also been reported, including stressful events, anger, anxiety, sadness, tension, and boredom (Grant *et al.*, 2012; Roberts *et al.*, 2013).

Dermatillomania is associated with many co-morbidities, most commonly anxiety disorders and depression (Grant and Chamberlain, 2020), and can have several adverse impacts including significant tissue damage, scarring, reduced psychosocial functioning and increased risk of suicide (Flessner and Woods, 2006; Moreno-Amador *et al.*, 2022; Tucker *et al.*, 2011), highlighting the need for effective intervention.

Clinical management of dermatillomania

The National Institute for Health and Care Excellence (2005) groups dermatillomania with obsessive-compulsive and body dysmorphic disorders (BDDs). Specifically, bodily pre-occupations (e.g. with the skin) and the time-consuming repetitive behaviour of skin picking are considered as parts of BDD. The recommended psychological intervention is cognitive behavioural therapy (CBT; National Institute for Health and Care Excellence, 2005), with a stepped-care approach of treatment intensity depending on functional impairment.

Evidence base for dermatillomania treatments

Early research on psychological interventions for dermatillomania placed emphasis on behaviour, namely through habit reversal training (HRT). HRT is designed to treat repetitive behaviours, such as tics and BFRBs, including skin picking, hair pulling and nail biting (Dunbar *et al.*, 2018), through two main components. The first is awareness training, where self-monitoring is used to identify the earliest internal and external signs of skin picking episodes. Signs may include situations and settings, thoughts, emotions, bodily sensations and behaviours. The second is competing response training, which involves developing and practising different behaviours to replace skin picking. Such behaviours should be easy, accessible and incompatible with the target behaviour (skin picking) and not result in undesired consequences (Mansueto *et al.*, 2020). Other aspects of HRT include building motivation (e.g. listing drawbacks of habit and/or through social support), relaxation training and generalisation of skills (practising in a variety of contexts).

An early randomised controlled trial (RCT) evaluating HRT found significantly greater reductions in daily skin picking occurrences compared with a waitlist control at post-intervention (77% decrease versus 16% decrease) and 3-month follow-up (Teng *et al.*, 2006). These results were confirmed by severity ratings of skin injury photographs. However, the study had no active control, making it difficult to ascertain if these effects were due to HRT or non-intervention specific factors (e.g. motivation, support). In a subsequent RCT with an active control group (decoupling), adults receiving HRT showed significantly greater skin picking symptom improvements (Moritz *et al.*, 2012). However, no follow-ups were included, meaning long-term effectiveness could not be determined.

Whilst the literature supports the short-term effects of HRT, dysfunctional and irrational cognitions are also reported in BFRBs such as skin picking which may not be sufficiently addressed by behavioural interventions alone (Schuck *et al.*, 2011). Therefore, CBT, which combines cognitive and behavioural techniques, gained interest for dermatillomania (Jafferany

and Patel, 2019; Pozza, 2023) and is recommended by the National Institute for Health and Care Excellence (2005). CBT focuses on the interconnections between thoughts, emotions, bodily sensations and behaviours (Beck and Beck, 2011). Theoretically, by changing the thoughts, feelings and behaviours assessed to be maintaining symptoms, clinical improvements can occur.

In an RCT by Schuck *et al.* (2011), adults receiving CBT including HRT showed significantly larger reductions across clinical outcomes (e.g. skin picking, dysfunctional cognitions, psychosocial functioning) than a waitlist control, both post-intervention and at 2-month follow-up. However, participants were not formally assessed for dermatillomania and impacts of the treatment on common co-morbidities were not considered. Treating common co-morbidities, such as anxiety and depression, may be important, especially given that skin picking episodes can be triggered by such feelings (Grant *et al.*, 2012; Roberts *et al.*, 2013).

A more recent RCT evaluated the effectiveness of CBT on adults with DSM-5 (American Psychiatric Association, 2013) dermatillomania diagnoses (Xavier *et al.*, 2020). CBT was supported as effective for dermatillomania when delivered through individual (63% remission) and group sessions (52% remission). Symptom reductions for anxiety and depression were also reported, supporting the effectiveness for treating dermatillomania with common co-morbidities. To help increase access, self-help CBT and HRT interventions, requiring fewer resources, have also been found to be effective for BFRBs including dermatillomania in the context of depression (Gallinat *et al.*, 2019; Mehrmann *et al.*, 2023; Schmotz *et al.*, 2023), providing additional support for such intervention models.

Taking a formulation-driven approach to psychological interventions such as CBT has also been found to be helpful (Persons, 2008; Persons *et al.*, 2019) to address factors maintaining presenting difficulties. This may include utilising techniques to target common factors which have been associated with skin picking, such as shame, self-criticism and perfectionism (e.g. self-compassion) (Houazene *et al.*, 2021a; Houazene *et al.*, 2021b) as well as those that may be maintaining co-morbidities (Persons *et al.*, 2006).

Despite recent literature consistently supporting CBT and HRT for dermatillomania, few studies have considered their effectiveness with clients in real-world clinical settings, especially in the context of co-morbidities. Case reports focusing on psychological interventions for dermatillomania, particularly informed by individualised case formulations, are also limited.

Aims

This report presents a case of treating dermatillomania in the context of anxiety and low mood in a community setting. The report aims to add to the evidence base on the effectiveness of CBT including HRT for dermatillomania, along with being formulation-driven.

Case study

Client characteristics

Anya, a white British, female in her early 20s, was referred to a community NHS service by her GP for dermatillomania. Anya was living with university friends, as a full-time undergraduate student. Anya's main support network consisted of her parents, course friends and local Christian community, especially at the church she actively attended.

Anya had experienced skin picking since pre-adolescence, following other anxiety-related difficulties. She had previously received CBT and eye movement desensitisation and reprocessing (EMDR) for several phobias (spiders, planes, blood, vomiting, cars), private CBT for generalised anxiety and systemic family therapy to help her family (notably her parents, older sister and younger brother) adjust to stressors related to Anya's former chronic fatigue syndrome (now physically healthy) and her sister's health difficulties.

Anya had found the structure of CBT and techniques (e.g. cognitive restructuring) helpful for her generalised anxiety but described a disconnect between her learning from CBT and skin picking, as dermatillomania had not been the focus. Anya's pre-occupation with skin picking was now detrimentally impacting her social life and studying, prompting her to seek CBT sessions for dermatillomania. Throughout her life, Anya had chosen to not take medication for her mental health.

Following an initial appointment within the service, Anya had been placed on the CBT waitlist. The trainee clinical psychologist, referred to hereafter as the therapist, re-assessed Anya upon allocation.

Presenting difficulties

Anya described dermatillomania as her main difficulty, which started at 11 years old. Anya had also been formally diagnosed with generalised anxiety disorder and experienced what she referred to as periods of 'low mood'.

At the point of assessment, she was having three to six skin picking episodes daily, each lasting 5–30 minutes, resulting in frequent bleeding and scarring. Using her hands/tweezers, Anya picked facial skin that looked/felt 'wrong' (typically marks/bumps/existing scabs of atypical colour, shape or texture). Anya reported noticing such skin that looked/felt wrong and general anxiety as triggers for skin picking urges. She reported social support as a helpful modifier, especially if someone redirected her focus (e.g. with reading or her fidget ring).

Anya described skin picking to funnel and regulate her anxiety, not intending harm, and described experiencing anxieties around transitions, saying/doing the 'wrong' things and lacking control. Therefore, it was postulated that reducing Anya's anxiety may reduce skin picking.

Anya also described sometimes feeling low, weary and hopeless. Potential associations between skin picking and distress arising from low mood were considered, but she reported skin picking irrespective of this. Anya described occasional thoughts of wanting to 'escape' and become 'unalive', although reported that her suicidal thoughts had never extended to having plans or intent. No risks to or from others were reported. Anya described feeling motivated to keep safe and identified family, friends, painting, embroidery, comedy and attending church as protective factors.

Anya described experiencing 'two significant and stressful life changes' in 2020 (moving across England to be closer to her grandparents and starting university). The frequency and severity of her skin picking had since increased, making socialising and focusing on her studies harder. Anya described feeling ashamed of her skin picking and avoided/withdrew from others by staying in her room. She noted checking her skin and wearing make-up to hide her skin as safety behaviours.

Formulation

Longitudinal CBT formulation

A longitudinal CBT formulation was collaboratively put together (Beck, 1979), to build an understanding of the development and maintenance of Anya's presenting difficulties (Fig. 1).

Anya identified her experiences of childhood illnesses (her own and her sister's) and a difficult childhood 'friendship' as being particularly salient. As shown in Fig. 1, Anya's early life experiences informed the development of her core beliefs, with her strongest belief being 'I am not good at being a person' (belief rating; 79%). To cope with her core beliefs, Anya had developed several rules for living, predominantly surrounding being in control and not making mistakes/ getting things wrong. Anya described skin picking as a way of fixing something (e.g. marks on her skin) to gain a sense of control as well as channel and regulate her anxiety when situations felt uncontrollable, confusing and/or overwhelming.

Figure 1. Diagrammatic version of longitudinal formulation collaboratively developed in sessions.

Anya reported that moving and starting university in 2020 were difficult transitions. Life lacked control and she noticed her self-criticism heightening (therefore breaking her rules for living and activating her core beliefs), precipitating a worsening in dermatillomania.

Maintenance cycles

Cross-sectional model

Using a recent skin picking episode as an example, a cross-sectional formulation was developed (Fig. 2) to demonstrate the interactions between thoughts, emotions, bodily sensations and behaviours, and begin considering how some responses may be maintaining the presenting difficulties (Padesky and Mooney, 1990).

Vicious flower

A vicious flower formulation was then collaboratively developed (Fig. 3) to build a shared understanding of maintenance cycles and inform treatment (Moorey, 2010; Salkovskis *et al.*, 2003). Each petal described a response to the presenting difficulties (skin picking and main core
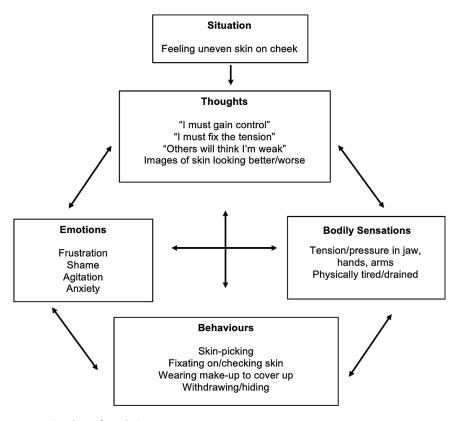
Figure 2. Cross-sectional CBT formulation.

belief), with the surrounding information considering how each response maintained these difficulties.

A pattern was noted that, whilst an initial sense of relief may have been present, several cognitive and behavioural responses resulted in anxiety and a 'need to fix/control' through further skin picking. This supported the link between anxiety and dermatillomania identified earlier in the assessment.

Measures

Outcome measures were administered to monitor symptoms and intervention effectiveness (Tansella and Thornicroft, 2001).

Standard service measures

Routine service measures were completed at the start and end of the intervention, as follows.

The Clinical Outcomes in Routine Evaluation – Outcome Measure (CORE-OM; Evans *et al.*, 2002) measured global psychological distress. CORE-OM has 34 items, each scored 0–4. To derive an overall score, the mean score across the items was calculated and then multiplied by 10 (total score = 0–40), with higher scores indicating greater global psychological distress. CORE-OM has been supported as reliable and valid (Evans *et al.*, 2002). At assessment, Anya scored 25/40 (moderate–severe global psychological distress range).

The Work and Social Adjustment Scale (WSAS; Mundt *et al.*, 2002) measured functional impairment across five domains: work, home management, social leisure, private leisure and
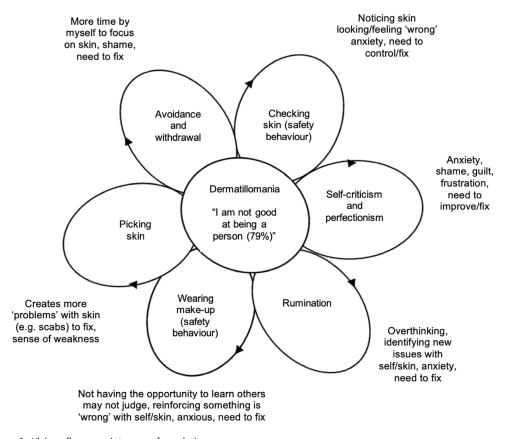
Figure 3. Vicious flower maintenance formulation.

relationships. WSAS is a 5-item measure (one per domain), each scored 0–8 (total = 0–40), with higher scores representing greater functional impairment. The WSAS has been supported as reliable and valid (Mundt *et al.*, 2002). At assessment, Anya scored 26/40 (severe functional impairment range).

Symptom-specific measures
Based on Anya's presentation, the following symptom-specific measures were completed at the beginning, middle and end of treatment.

The Generalised Anxiety Disorder-7 (GAD-7; Spitzer *et al.*, 2006) measured anxiety symptoms. GAD-7 is a 7-item measure, each scored 0–3 (total = 0–21), with higher scores indicating higher levels of anxiety symptoms. GAD-7 has been shown to be reliable and valid in adults with anxiety (Spitzer *et al.*, 2006).

The Skin Picking Scale (SPS; Keuthen *et al.*, 2001b) measured skin picking symptoms through six items (frequency, intensity, duration, interference, distress, resulting avoidance) (scored 0–4, total score = 0–24, with higher scores indicating higher levels of skin picking symptoms). The SPS has been supported as reliable and valid in adults who skin-pick (Keuthen *et al.*, 2001b).

The Skin Picking Impact Scale (SPIS; Keuthen, *et al.*, 2001a) measured psychosocial impacts of skin picking. SPIS is a 10-item measure (scored 0–5, total score = 0–50, with higher scores indicating greater psychosocial impacts of skin picking). The SPIS has demonstrated reliability and validity in adults with non-self-injurious skin picking (Keuthen *et al.*, 2001a).

Goals

Anya initially identified broad goals of feeling 'freer'. Adopting the SMART (specific, measurable attainable, realistic, timely) framework (Doran, 1981), the following goals were collaboratively identified by the first treatment session:

'*Make a meal in the kitchen once a day*'

'*Leave my room without make-up on to fill up water bottle three times a week*'

'*Leave the house without makeup on*'

Goals were rated from 0 to 10, with a higher number indicating being closer to reaching the goal.

Client feedback

Client feedback was gathered verbally during sessions and through written feedback forms.

Intervention

Based on the assessment and formulation, alongside the evidence base and clinical guidelines, the therapist delivered individual CBT including HRT. This was consistent with Anya's choice. In line with National Institute for Health and Care Excellence (2005) guidelines for moderate–severe functional impact, more than 10 sessions were offered. Anya's formulation and the obstacles encountered during treatment also informed the intervention, as described below.

All sessions were 50 minutes in length. Fifteen sessions were face-to-face, and five sessions were online via Microsoft Teams (three due to Anya returning home to her family home for a period during the university holidays and two due to the therapist needing to isolate with COVID-19). Four assessment/formulation sessions followed by 16 treatment sessions were completed. The content and techniques covered in the intervention sessions are described below. Anya also completed between-session tasks each week to consolidate and build upon her learning and practise the techniques.

CBT socialisation and psychoeducation

Initial sessions focused on psychoeducation, guided discovery and Socratic questioning to develop the formulation and build on Anya's pre-existing CBT knowledge.

Behavioural techniques

HRT

Awareness training, stage one of HRT (Dunbar *et al.*, 2018), was delivered first to target Anya's primary difficulty (skin picking). Using skin picking diaries, Anya noted most of her skin picking occurred at the start/end of the day, especially when alone and/or taking off her make-up (and noticing skin that looked/felt 'wrong'). She became increasingly aware of an initial skin tightening sensation, like a '*niggling tension wrapped tightly around a coil*'.

Competing response training, stage two of HRT, was delivered to develop alternative behaviours (easy, accessible, incompatible with skin picking; Mansueto *et al.*, 2020). Anya listed the drawbacks of skin picking and identified clenching both fists and clasping hands/fingers together as competing responses. She trialled these in response to early warning signs of skin

picking episodes between sessions (competing responses were continually practised throughout treatment in a variety of contexts).

Behavioural activation

Early on in therapy, low mood was identified as an obstacle for motivation and engagement. In consideration of her vicious flower maintenance cycle 'avoidance and withdrawal', behavioural activation was used to schedule pleasant activities to elevate her mood (Kanter *et al.*, 2010). For Anya, this included activities that she had identified as enjoyable and meaningful, including prayer/worship and painting.

Behavioural experiments

Behavioural experiments were introduced to challenge the identified safety behaviours of checking and wearing make-up. In line with her goals, as a behavioural experiment Anya planned situations to wear less, or no, make-up and tested her cognitions/predictions, for example that 'others will ask about my skin'. Anya was mindful to not slip into other safety behaviours, such as wearing a hat or keeping her head down. When reviewing the evidence/outcomes afterwards, Anya noted her belief ratings had reduced and her confidence about approaching more situations without wearing make-up had increased. To help maintain this confidence, Anya was encouraged to use imagery to visualise times that she had managed to not wear make-up. Between sessions, Anya continued practising behavioural experiments, and exposed herself to previously avoided situations, reducing her anxiety further and reinforcing more balanced beliefs.

Cognitive techniques

Thought challenging

Although Anya's skin picking was reducing, she recognised finding it hard to resist urges to skin-pick when her dysfunctional thoughts persisted (ruminating), resulting in anxiety. Cognitive distortions were discussed and identified through completing thought records between sessions. Example trigger dysfunctional thoughts included 'if I am not perfect, I am a failure' (all or nothing thinking), 'I should always get things right' and 'my skin must not have scabs' (should/must statements), 'I will never get a job after university' (catastrophising) and 'I am inadequate' (labelling).

Challenging these cognitive distortions was then focused on, by mapping out the facts providing evidence for and against unhelpful thoughts before coming up with alternative, more realistic and balanced perspectives. For catastrophic thoughts, decatastrophising was used, involving mapping out her worries in terms of their likelihood, how bad it would be if they came true and then Anya's resources to manage (coping abilities and support). Anya described finding these strategies helpful and noticed that the intensity of her emotions decreased as she reframed her thoughts.

Self-compassion

During skin picking urges, Anya noticed her self-critical thoughts/internal dialogue increasing in frequency and intensity. She identified such self-criticism as an obstacle for practising competing responses. Guided by Anya's formulation, to target Anya's maintenance cycle 'self-criticism and perfectionism', techniques from compassion-focused therapy (CFT) were integrated into the intervention, to help foster self-compassion (Gilbert, 2009; Gilbert, 2014). For example, the evidence behind her self-critical thoughts, including her most salient core beliefs, was considered and self-compassionate alternatives and statements (e.g. 'I deserve kindness' and 'I am learning each day') were identified (Irons and Beaumont, 2017). Drawing on her Christian faith, Anya

considered seeing herself through God's eyes, to help foster a self-compassionate and nurturing stance.

Anya also kept a log of things that had gone well/she was pleased with and wrote down her qualities behind these things, such as her kindness and creativity. She reflected that being self-compassionate and identifying nice things about herself felt like 'insulation'. The three emotion regulation systems described in CFT (Gilbert, 2009; Gilbert, 2014) were also considered. She identified herself as having a large threat mode, with a slightly smaller drive mode and a much smaller soothe mode. She noticed that sometimes she would switch between the threat and drive mode and be in drive mode for fear of negative consequences (threat-based drive). The importance of nurturing ourselves was discussed and ways to cultivate the soothe system (for example, through compassionate letter writing and using imagery and memory; Irons and Beaumont, 2017), in order to get the three systems into balance, were practised.

Anxiety tolerance and relaxation techniques

When tolerating anxiety was reported as an obstacle for practising competing responses, psychoeducation on anxiety habituation was provided. Throughout therapy, techniques to support with tolerating/reducing anxiety (especially bodily sensations reported such as tension) were practised in a variety of contexts. This included diaphragmatic breathing, 4-7-8 breathing and progressive muscle relaxation.

Therapy blueprint

Anya's therapy blueprint demonstrated the range of learning she gained from therapy, what had changed, and what she could do to manage setbacks. A plan was also described for Anya to continue having regular 'check-ins' with herself, to review her therapy notes and make sure she was continuing to apply what she had learned independently. Anya also planned to continue setting goals in line with what is important to her and her values.

Engagement and collaboration

Sessions were adapted around Anya being a university student. Some sessions were delivered online, and session summaries were shared to support content retention after Anya reported the obstacle of being 'cognitively overloaded' from her studies. Between-session tasks were collaboratively set, in part to ensure it was realistic in the context of Anya's studies, and Anya was prompted to set regular reminders on her phone. As Anya had compared previous negative therapy experiences to seeming '*like school or lectures*', collaboration (e.g. during agenda setting and facilitating autonomy/choice for activities) was also especially important to build rapport and ensure sessions felt less didactic.

Risk and safety planning

Risk was continually monitored through verbal check-ins as a standing agenda item for each session. No further risk issues, adverse events (harms) or unanticipated events occurred.

Results

Outcome measures

For global psychological distress, between sessions 1 and 20, Anya's CORE-OM scores showed an overall reduction from 25/40 (moderate–severe range) to 9/40 (low level range)
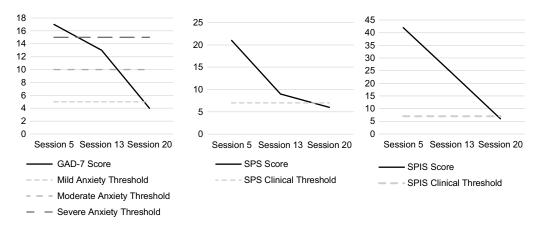
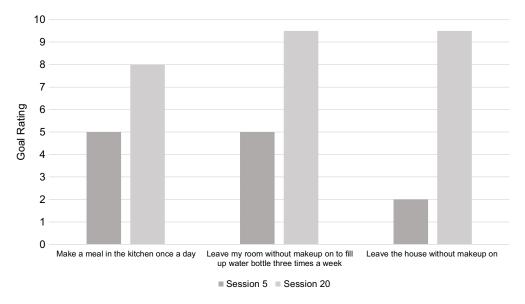**Figure 4.** GAD-7, SPS and SPIS scores across treatment.

Figure 5. Ratings for goals at the beginning and end of treatment.

(Evans *et al.*, 2002). Anya's WSAS scores also showed an overall reduction between sessions 1 and 20, from severe (26/40) to low level impairment range (8/40) (Mundt *et al.*, 2002).

As shown in Fig. 4, Anya's anxiety (GAD-7) scores reduced from severe to minimal range (Spitzer *et al.*, 2006). Anya's scores for skin picking (symptoms and psychosocial impacts), SPS and SPIS, also reduced, both ending below the clinical thresholds for both measures of ≥ 7 (Keuthen *et al.*, 2001a; Keuthen *et al.*, 2001b).

Goals
Goal ratings also increased during treatment (Fig. 5).

Client feedback

Anya reported that mapping out her longitudinal formulation had helped to '*contextualise and process*' her current difficulties and have the '*mental energy to start overcoming them*'. Anya described working on cognitive distortions helpful, as '*I can now identify when my thinking is unbalanced to consider alternatives*'. Anya also reported that developing competing behaviours had made skin picking '*less of an inevitability when I have the initial sensations. I know I can mitigate*'. Towards the end of therapy, Anya reported her main core belief had reduced from 79% to 32% and described being '*less governed by it*'. During the final session, Anya described '*no longer picking my skin in situations that I used to*', her skin as '*healing well*' and having '*the tools for supporting myself and my wellbeing going forward*' and '*hope for the future*'.

Discussion

Adding to the current evidence base, this case study aimed to evaluate CBT including HRT for dermatillomania in the context of anxiety and low mood. Pre- to post-intervention, improvements were reported in client-centred goals and outcomes of global psychological distress, functioning, anxiety and symptoms and psychosocial impacts of skin picking. Additionally, the intervention was well received by Anya.

The intervention was guided by a combination of the evidence base, clinical guidelines and Anya's formulation, needs and preferences. Anya's feedback indicated perceived benefits from both behavioural and cognitive techniques. This supports targeting dysfunctional cognitions assessed as contributing to the formation and maintenance of dermatillomania (Beck and Beck, 2011; Schuck *et al.*, 2011) alongside behaviours, to reduce skin picking.

The intervention was also formulation-driven (Persons, 2008; Persons *et al.*, 2006; Persons *et al.*, 2019), in that the techniques used from previous CBT and HRT for dermatillomania literature (Dunbar *et al.*, 2018; Lochner *et al.*, 2017; Mansueto *et al.*, 2020; Xavier *et al.*, 2020) were guided by Anya's formulation. Moreover, whilst not included in CBT and HRT intervention protocols in previous studies (e.g. Xavier *et al.*, 2020), behavioural activation and self-compassionate techniques from CFT were integrated into the intervention, given Anya's low mood and maintenance cycles 'avoidance and withdrawal' and 'self-criticism and perfectionism'. Following ethical principles for adapting interventions, such integrated techniques were evidence-based (Leach *et al.*, 2012).

This case study also supported adapting interventions for sociocultural factors, such as religion and being in education. For example, a sensitive and curious approach was taken to explore how Anya's faith could support with intervention techniques (e.g. behavioural activation and fostering self-compassion) which Anya described as empowering. The therapist also reformulated the vicious flower with Anya, to include low mood as a maintenance cycle, when Anya described that her low mood had led to reduced motivation to practise techniques and challenge skin picking. In hindsight, using an outcome measure for depression may have been helpful, to gather specific data regarding the intervention's effectiveness on mood.

It is noteworthy that whilst CBT is the recommended psychological intervention for 'body-dysphoric related disorders' (including dermatillomania) in National Institute for Health and Care Excellence (2005) guidelines, HRT is not specified. This may be because the guidance is from 2005 and psychological intervention research for dermatillomania has predominantly been conducted since. Additionally, whilst dermatillomania is more common in, and can be related to, BDD (Grant *et al.*, 2006), HRT is not used to treat BDD specifically (Phillipou *et al.*, 2016; Phillips, 2017). Given the increasing evidence base for CBT including HRT for BFRBs such as dermatillomania, it may be beneficial for future guidelines to recognise this distinction and develop care pathways and recommendations specifically for BFRBs (i.e. not only as part of BDD).

Considering this case within more of a systemic framework may have also been helpful, especially given Anya's early interpersonal life experiences and family scripts around illness. For example, it may have been relevant to consider if her family relationships and interactions were enabling any of her maintenance cycles. Thus far, some research supports the impact of family relationships on BFRBs including skin picking (for example, Yasir and Kazmi, 2021) and social support (e.g. from family) can form part of HRT (Dunbar *et al.*, 2018). However, previous literature has not yet considered the treatment of dermatillomania systemically, warranting further research. Furthermore, alternative interventions, including acceptance and commitment therapy (ACT) and acceptance-enhanced behaviour therapy (AEBT), which combines acceptance commitment therapy and HRT, have also shown promise (Asplund *et al.*, 2021; Capriotti *et al.*, 2015; Flessner *et al.*, 2008; Twohig *et al.*, 2006). Thus, future research could include moderation analyses to identify if patient subgroups (e.g. sociodemographic factors, symptoms-profiles) are more likely to benefit from each intervention (e.g. modality, intensity), to optimise access and outcomes.

Limitations

Findings from the presented case study should be interpreted cautiously. Anya's previous experience of CBT, and therefore familiarity, may have also impacted progress (Greenberg *et al.*, 2019). Moreover, all measures were self-reported, which may lend to response bias. As in previous research, a photographic instrument could have been used for more objective ratings of skin injuries (e.g. Teng *et al.*, 2006). However, this may not have been ethical in the service context and absence of training to rate such data. Due to service constraints, collecting follow-up data was also not possible.

Although this study supports the use of CBT including HRT for dermatillomania in real world practice, as opposed to within the confines of strict eligibility criteria, the single case study design limits generalisability. It would be oversimplified to attribute change solely to the intervention, given that Anya's motivation and the process of being in supportive therapy itself may have contributed. Therefore, whilst this report adds to the limited evidence, further intervention research is needed. Ideally this would include large-scale RCTs comparing the effectiveness of CBT including HRT to active control conditions with long-term follow-ups.

Conclusion

Adding to the current evidence base, this case study provides preliminary support for using CBT including HRT to treat dermatillomania in a young woman with co-morbid anxiety and low mood in a community setting. Promisingly, both cognitive and behavioural elements of the intervention were well received by the client and pre-post improvements in client-centred goals and a range of clinical outcomes were found. Taking a formulation-driven approach to guide the intervention and adapting for sociocultural factors were also supported. Further research is needed including large scale trials with long-term follow-ups. Developing recommendations and care pathways specifically for BFRBs including dermatillomania may also be beneficial.

Key practice points

(1) Both cognitive and behavioural techniques for treating dermatillomania in the context of anxiety and depression are perceived as beneficial.
(2) Being formulation-driven and adapting interventions for sociocultural factors can be useful.
(3) Further large-scale trials with active control conditions and long-term follow-ups are required prior to conclusions about the effectiveness of this approach.
(4) Development of recommendations and care pathways specifically for BFRBs such as dermatillomania may be useful.

Further reading

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