

***“Is this the life that I want to have?”***

**Values-based self-affirmation for young people with  
dermatological conditions.**

Submitted by

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**Declaration:**

This work has not been submitted to any other institution  
or for any other qualification.

## **Structure and word count.**

### **Target journals**

The literature review in this thesis has been prepared for Clinical Psychology Review, and is consistent with their guidelines for authors. The research report in this thesis has been prepared for Psychology & Health, and is consistent with their guidelines for authors. These peer reviewed journals were approved by the University of Sheffield (see Appendix A for guidance for authors and letter of journal approval).

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**“He who has a *why* to live can bear with almost any *how*”**

**(Nietzsche)**



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(and Mum, Dad: Yes. I'm actually going to get a job now).

## **Abstract**

### **Section one: Literature review**

#### ***Values as therapeutic foci, processes and motivators: a systematic review.***

A systematic search revealed 19 papers pertaining to therapeutic use of values. Six reported significant positive correlations between values-based living and well-being. Twelve of the remaining 13 presented evidence that supported the use of values-based interventions to: enable the adaptive acceptance of distress (two), increase values clarity and values-based living (five of six), improve psychosocial/physical function (two), and increase tolerance of threats to self worth (three). Further research is required, particularly outside the populations of students and people with chronic health problems. A theoretical model is presented whereby values-based interventions may improve well-being through two compatible pathways: increasing values-based living and reducing psychological threat to self worth.

### **Section two: Research report**

#### ***Values-based self-affirmation for young people who experience skin-related distress***

A multiple case studies approach was used to evaluate a values-based self-affirmation intervention using nomothetic measures, idiographic daily repeated measures and qualitative data. Participants comprised 11 young people with psychosocial distress self-attributed to their dermatological condition.

Depression and anxiety reduced significantly at the group level ( $p < 0.05$ ), and individual level ( $N=7$ ). Skin-related frustration and restrictions reduced, whilst reported preoccupation and concealment increased. Qualitative data indicated increased

values-based living and reduced skin-related threats to self-worth post-intervention.

Participants identified empathic discussion to be more important than self-affirmation.

Skin-related distress in young people can be reduced using a simple intervention that could be implemented by nursing staff. Further research is required to clarify the active components and mechanisms of change.

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**Values as therapeutic foci, processes and  
motivators: a systematic review.**

## **Introduction**

Therapy is a difficult and painful endeavour (Wilson & Sandoz, 2008), requiring clients to release their defences, expose themselves to their own pain, and allow themselves to risk hoping for a better life. For a client to engage and continue with therapy despite these painful and potentially frightening experiences, they need to believe that it is worthwhile. Client dropout has been found to be a significant problem in therapy, with a meta-analysis of 125 studies of psychotherapy dropout rates finding a mean rate of 47% (Wierzbicki & Pefarik, 1993). A key question is therefore: what motivates people to persist with therapy?

A critical motivator for any human behaviour is the person's own values. Within the therapeutic context, values provide "something meaningful to dignify the suffering that treatment produces" (Wilson & Murrell, 2004 p. 140). Therapeutic consideration of values may enable clients to persist with therapy, risk different behaviours, and could potentially alleviate a cause of significant distress (e.g. Rogers, 1964): the discrepancy between one's values and one's actions.

Values have had a long and varied history in therapy, and they form a central part of the emerging "third wave" of behavioural and cognitive therapies (Hayes, Strosahl & Wilson, 1999). Despite the long history, relatively little attention has been paid to the effectiveness of values-based approaches. This review will focus on the evidence for the therapeutic use of values, first briefly considering some of the different therapeutic conceptualisations of values and then reviewing the evidence that a discrepancy between values and action is linked to distress, and that clarifying values leads to increased function, well-being, and/or increased values-based living.



## **Therapeutic approaches to valuing**

Broadly, values are defined as concepts that matter to a person and things that the person cares about doing or being. Values can be studied as an object or a process. The former, which concerns the “structure” of values (e.g. Allport, Vernon & Lindzey, 1960), is beyond the scope of this review. This review will focus on the study of “values as process”. This is a primarily behavioural stance, primarily considering the interaction between one’s values and one’s actions (e.g. Wilson & Murrell, 2004). Several therapeutic approaches consider the process of values and valuing, as summarised below. For further consideration see Dahl, Plumb, Stewart and Lundgren (2009).

*Values in the face of suffering:* Logotherapy focuses on actualising values and finding personal meaning in life (Frankl, 1959). Values and values-based living are considered to be “the last of the human freedoms” (p.65). The client is encouraged, in the context of suffering, to choose to act in accordance with their self-identified life’s meaning.

*Values clarification:* Within person-centred therapy (Rogers, 1964) and Values Clarification theory (Raths, Harmin & Simon, 1966), introspection is used to clarify what one truly values. One becomes aware of the discrepancy between one’s values and one’s actions, which Rogers believed is the source of much distress. Awareness can then enable the decision to live a more values-coherent life.

*Values as motivators:* Motivational interviewing (Miller & Rollnick, 2002), and the related Good Lives Model (Ward & Brown, 2004), reconceptualise problematic behaviours as misguided attempts to achieve valued ends. The motivational aspects of long term valued goals are explicitly employed.

*Values as sources of self affirmation:* Consideration of personal values is hypothesised to be self-affirming and hence help one to contend with threats to “self-integrity”, i.e. threats to self-worth (Sherman & Cohen, 2006).

*Values as directions:* Within Acceptance and Commitment Therapy (ACT<sup>1</sup>) values are conceptualised as the direction in which a person chooses to travel (Hayes, Strosahl & Wilson, 1999). Values are “a special class of reinforcers” (Wilson, Sandoz, Kitchens & Roberts, *in press*, p.9), which comprise words and concepts rather than physical objects, are ongoing and cannot be “completed”, and reinforce for their own sake, not because of secondary gain (see also Plumb, Dahl, Stewart & Lundgren, *in press*).

*Summary:* Theoretically, values are motivators for and reinforcers of therapeutic change. Values provide both the direction for therapeutic change and the justification of the hard work entailed. They may help one to withstand the threat of change and the threat of lowering one's psychosocial defences by affirming one's self worth. Theoretically, an increase in values clarity could increase values-based living, which would be predicted to increase well-being (e.g. Dahl et al., 2009). These various conceptualisations of values therefore converge on the hypothesis that clarifying values and increasing values-based living would be therapeutically beneficial.

### **Methodology of this review**

There have been many theoretical papers about values in psychotherapy (e.g. Frankl, 1959; Plumb et al., *in press*). However, no one has systematically reviewed the experimental and clinical evidence for the psychotherapeutic use of values. The goal of

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<sup>1</sup> ACT is a “third wave” behavioural and cognitive therapy which aims to help clients to live in the present, accepting unwanted thoughts and feelings in the service of values-based actions (Hayes et al, 1999).

this review is hence to describe and critically evaluate the body of evidence 1) linking values to well-being<sup>2</sup> and 2) around the therapeutic use of values.

Relevant articles were searched for using the PsycINFO database (1806-current), during May 2009. Search terms were applied to all fields. The searches undertaken were “therapy” AND “values” AND “psychology” (630 results); “intervention” AND “values” AND “psychology” (80 results); “values clarification” AND [“therapy” AND/OR “psychology” AND/OR “intervention”] (78 results). An initial scan of titles revealed that most of these papers either focused on group-level analysis of cultural or family values, or focussed on “statistical values” or the therapist’s own values. The elimination of papers that clearly did not pertain to the client’s personal values in a therapeutic context reduced the sample to 117.

It was considered *a priori* that some recent literature would stem from the ACT community, so a separate search of the website [www.contextualpsychology.org](http://www.contextualpsychology.org)<sup>3</sup> was conducted. A brief scan of the 819 publications listed on 15<sup>th</sup> May 2009 revealed 67 empirical papers with substantive “values” content. References of key papers were also searched. Finally, a direct request for in press or additional papers was made to subscribers to the contextualpsychology.org listserv on 4<sup>th</sup> June 2009.

The abstracts and where necessary full content of these papers were used to determine eligibility. No restrictions were used regarding participant group, outcome variables, statistical power or experimental methods. Approaches using values to aid

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<sup>2</sup> The term “well-being” is used to signify subjective vitality and high quality of life. It may include, but is broader than, simply reduced levels of unwanted symptoms.

<sup>3</sup> “Contextual psychology”, closely linked to behavioural analysis, refers to the study of human (and non-human) behaviour within its current and historical situational context.

health decisions (values clarification literature, e.g. Uustal, 1978) or increase acceptance of threatening health or social information (self-affirmation literature) were excluded because they did not directly pertain to psychotherapy and the self-affirmation literature is reviewed elsewhere and (McQueen and Klein, 2006). The following inclusion criteria were applied: English language, peer-reviewed (or in press), an intervention, outcome measure or process measure that uniquely pertained to values and enabled at least partial separation of values processes from other processes.

The above search strategy yielded 19 studies that fitted the specified criteria. These have been divided into two categories with the latter subdivided into four subcategories – each shall be considered in turn. Six studies specifically investigated the association between value-based living and psychosocial and physical well-being<sup>4</sup>. Thirteen investigated the use of values-based interventions to: provide a motivational context for the adaptive acceptance of distress (two), clarify values and increase value-based action (six), improve psychosocial and physical function (two) and increase tolerance of threats to self worth (three).

### **Correlations between values-based living and well-being**

The six papers pertaining solely to the correlation between value-based living and well-being are summarised in Table 1. The studies used four different measures of values-based living which took two distinct formats. Broadly three different populations participated: people with chronic pain, students and rehabilitation workers. Measures of well-being took several forms, including those regarding physical and psychosocial disability, health measures, daily satisfaction ratings, depression, anxiety and vitality.

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<sup>4</sup> See also Lundgren, Dahl, Melin & Kies, (2008) and Vowles & McCracken (2008): Table 2 (page 15) and page 23.

The six studies provide converging evidence to support the association between values-based living and measures of function and well-being, from different populations, using different measures and different methodologies. The following discussion provides a critique of the evidence and considers the extent to which the association can be generalised.

**Table 1: Studies associating values-based living with function and well-being.**

Study	Participants	Values measure	Results
McCracken & Yang, 2006	140 adults with chronic pain; UK; mean age 48; 68% F	CPVI (tool development)	VBL negatively correlated with self reported psychosocial, physical and “other” disability, depression, depression-related interference with functioning, and pain-related anxiety ( $p < 0.01 - 0.001$ ).
McCracken & Vowles, 2008	115 adults with chronic pain; UK; mean age 48; 57% F	CPVI	VBL at initial assessment negatively correlated with self reported psychosocial and physical disability, depression, depression-related interference with functioning, and pain-related distress and anxiety ( $p < 0.001$ ) and with medication use ( $p < 0.05$ ) at start of treatment (mean of 18 weeks later).
McCracken & Keogh, 2009	125 adults with chronic pain; UK; mean age 47; 65% F	CPVI	VBL negatively correlated with anxiety sensitivity (“fear of anxiety”; AS; $p < 0.001$ ). VBL negatively (and AS positively) correlated with medication, anxiety, depression, physical and psychosocial disability ( $p < 0.001$ ), and GP visits ( $p < 0.01$ ). VBL positively correlated with pain acceptance ( $p < 0.001$ ). Regression analyses indicated that VBL reduces the impact of AS.
McCracken & Yang, 2008	98 rehabilitation workers; Singapore; mean age 35; 78% F	BVI (developed from CPVI)	VBL negatively correlated with measures of stress and exhaustion ( $p < 0.001$ ), and positively correlated with work satisfaction ( $p < 0.05$ ); and general health, vitality and emotional functioning ( $p < 0.001$ ) and social functioning ( $p < 0.01$ ).
Oishi, Diener, Suh & Lucas, 1999	2 samples: 151 & 121 undergraduate students; USA; 86% aged 17-21; 64% F	PCVS	Values orientation moderated the correlation between life-satisfaction and satisfaction in specific domains (achievement, benevolence and conformity; $p < 0.01$ ). Values orientation also moderated the correlation between overall daily satisfaction and daily satisfaction with achievements and social life ( $p < 0.05$ ).
Wilson et al., (in press)	253 under-graduate students; USA; mean age 20; 77% F.	VLQ (tool development)	VBL negatively correlated with depression relationship difficulties, and general pathology ( $p < 0.001$ ), somatisation, hostility and treatment difficulty ( $p < 0.01$ ), and anxiety and experiential avoidance ( $p < 0.05$ ). VBL positively correlated with vitality and general mental health ( $p < 0.001$ ), social functioning ( $p < 0.05$ ), and action despite emotional ( $p < 0.001$ ) or physical ( $p < 0.05$ ) problems.

Abbreviations as follows: F = female, VBL = values-based living, AS = anxiety sensitivity, CPVI = Chronic Pain Values Inventory, BVI = Brief Values Inventory; PCVS = Pairwise Comparisons Values Survey; VLQ = Valued Living Questionnaire

### **Different measures and methods**

Four different measures of values were used: the Chronic Pain Values Inventory and Brief Pain Inventory (CPVI and BVI; McCracken & Yang 2006, 2008), the Valued Living Questionnaire (VLQ; Wilson et al., in press) and the Pairwise Comparison Values Survey (PCVS; Oishi et al., 1999). Each measure had been developed by the authors of the papers. McCracken and Yang (2006) and Wilson et al. are validation and reliability studies of the CPVI and the VLQ respectively. The PCVS was validated in a separate study (Oishi, Schimmack, Diener & Suh, 1998). The BVI has not been separately validated, but differs from the CPVI only with respect to the inclusion in the latter of introductory wording specific to chronic pain.

Studies described by McCracken et al. and Wilson et al. differed significantly from that of Oishi et al (1999). McCracken et al. and Wilson et al. used self-report Likert scales to rate the personal importance of values domains such as family and work, and how successfully one lives in accordance with domain-related values. These ratings were used to calculate values-based living, which was then correlated with well-being and functioning measures. In contrast, Oishi et al. (1999) measured values orientation using forced-choice pairwise comparisons of ten abstract values. Their measure of the effect of values-based living upon well-being was indirect: they investigated whether values orientation towards Benevolence or Achievement moderated the effect of daily satisfaction with social life and achievements upon overall daily satisfaction. They also reported that the interaction between general valued-domain satisfaction and values orientation significantly explained variance in life satisfaction.

The two approaches are conceptually related. However, they differed with respect to whether values and values-based living were made concrete, the potential impact of social desirability and intra-psychic defences, and how the measures were validated.

The more concrete the measure, the easier it may be to apply to one's life. The PCVS presents abstract value concepts, the VLQ presents valued domains as a simple list, and the CPVI/BVI present a shorter list with prompts and concrete guidance to encourage greater reflection on each domain. The CPVI/BVI may therefore elicit the most "accurate" response and the PCVS the least "accurate" response with respect to value importance. Oishi et al. (1999) asked for daily ratings, the VLQ asks for a rating for "during the last week", whilst the CPVI/BVI ask for a general rating of "success" at values-based living. The concrete time period given by the VLQ and the PCVS might enable more accurate reporting of values-based living.

Measuring "success" (CPVI/BVI) with values-based living may have provoked socially desirable and/or intrapsychically defended responses, relative to measuring the more neutral "consistency" (VLQ) or "satisfaction" (Oishi et al., 1999). Likert scales (CPVI/BVI and VLQ) might also provoke more socially desirable responses than forced choice scales (PCVS). Wilson et al. (VLQ) measured socially desirable response styles. They removed participants whose responses indicated problems with social desirability, but did not report how many participants were excluded. However, Oishi et al. completely separated the rating of values priorities from the reporting of satisfaction with values-related actions, thus making it unlikely that psychological defences or social desirability would affect their reported association between values-based living and well-being.



The measures were derived from different theoretical stances: the PCVS from a universal structure of values, (Schwarz et al., 1992) and the CPVI/BVI and VLQ from contextual behaviourism (Hayes et al., 1999). They thus used substantially different validation methods. Construct validity for the PCVS was examined by measuring convergence and correlation with other values measures (Oishi et al., 1998). Construct validity for the CPVI/BVI and VLQ was examined by measuring correlation with activity, well-being, and functional acceptance of unwanted and uncontrollable experiences (such as pain or sadness; McCracken & Yang, 2006; Wilson et al., in press). The CPVI/BVI and VLQ were thus developed and validated with the *a priori* belief that values-based living correlates with well-being: there is hence some circularity in citing them as evidence of this belief. However, this does not undermine their face validity as measures of values-based living. Furthermore, Oishi et al.'s study originated from a different theoretical stance and reported similar results. The differences between the measures is a strength of the literature, suggesting that values-based living affects well-being however it is measured.

### **Participants**

The studies had adequate sample sizes ( $N=98-253$ ). Men comprised just 31% of participants (range 22%-43%). Gender differences in values have been widely reported (e.g. Beutel & Marina, 1995); the association between value-based living and well-being cannot be assumed to be consistent between genders. However, Oishi et al. and McCracken and Yang (2006) reported that gender did not significantly affect their results. Generalisability is limited by low ethnic diversity within some of the papers. Employment diversity is also a limitation, with half of the papers reporting high (65%-84%) unemployment due to chronic pain, and a third of the papers only including

undergraduate students. McCracken and Yang (2008) found significant differences for ethnicity and profession in some well-being measures and in self-rated success at values-based living, but did not report whether this affected correlations between the two. It therefore cannot be surmised whether the relative homogeneity within the other samples significantly impacts upon the reported correlations between values-based living and well-being. As identified by Wilson et al., the VLQ study was limited by its sample of predominantly young, single students, who were limited in ability to measure success in parenting, intimate relations and employment values.

Although each of the six studies has limited generalisability, it is encouraging that these limitations take different forms. The pain studies involved a population who felt themselves to be significantly limited in their ability to live in accordance with their values, whereas the student samples represent a group perceived to have greater than average opportunity to live in accordance with their values (Wilson et al.). Although further research with more heterogeneous populations is required, the variance amongst the populations sampled indicates that the link between values-based living and well-being is not restricted to one demographic.

### **General considerations**

Correlation does not imply causation. In five of the studies (Wilson et al. and McCracken et al.), participants completed the values measures and the outcome measures in one sitting. A person's mood or self concept (e.g., "I am a failure" versus "I am a success") might affect scores both in values measures and in physical/psychological function measures. Furthermore, filling out the values questionnaire may have had a transitory impact upon well-being: the intra-psychic

difficulty arising from the realisation that one is not living in accordance with one's values might affect self-reports of mood, pain and disability. Likewise, a realisation that one *is* living in accordance with one's values would be self-affirming, and hence increase positive affect (Crocker, Niiya & Mischkowski, 2008). The temporal proximity of completion of the values measures and well-being measures may therefore have enhanced the correlations.

There is some evidence that completing the values measures may have had an impact on participants: McCracken & Vowles (2008) report a significant increase in values-based living ( $p < 0.01$ ) in the 18 week gap (with no intervention) between first and second administrations of the CPVI. Several explanations are plausible, however, presenting participants with the CPVI (and hence presenting them with the extent to which they fail to live according to their values) may in itself be powerful enough to facilitate change.

However, the evidence cannot be completely explained by transitory impacts of completing the values measures: Oishi et al. did not expose their participants to any lack of consistency between their values and their actions, and yet still found a significant effect. The potential effects of self-concept or mood in the other studies are also mitigated somewhat by the inclusion of objective measures of medication and General Practitioner visits, which had a significant negative correlation with values-based living (McCracken & Keogh, 2009; McCracken & Vowles, 2008). The prospective nature of McCracken and Vowles (2008) study further indicates that the association between values-based living and well-being cannot be explained simply by transitory changes in mood.

Furthermore, Oishi et al's result depended upon *differences* between satisfaction in Achievement and Benevolence domains, and an overall satisfaction score that more strongly positively correlated with the most valued domain. Variance in mood would not produce this effect, as participants who responded on the basis of mood would report low or high satisfaction both overall and in both value-related domains.

Despite the limitations of the participant samples and the dominance of single time-point methodology, there is promising evidence to support an association between values-based living and well-being. The research is consistent with the hypothesis that an increase in values-based living may result in increased well-being, but causality cannot be assumed. Increased well-being may enable a person to engage in greater levels of values-based living. Further research needs to be done to determine causality and to control for third variables that might account for the relationship.

### **Values-based interventions**

Table 2 summarises the 13 studies pertaining to the effects of values-based interventions. There are four main foci: motivation to adaptively accept distress, values clarification to increase values-based living, improvements in psychosocial and physical function, and reactions to threats to self worth; these will be considered separately and are grouped accordingly. Various experimental designs and measures of change were used. Populations were predominantly students or people with chronic health problems. Intervention varied in style and length, from a two-minute personal imagery exercise (Branstetter-Rost, Cushing & Douleh, 2009) to 24 weekly group discussions of values-based vignettes (Edwards & Allen, 2008). Twelve of the studies reported that values-based interventions significantly benefited participants, but

studies varied in the extent to which the impact of the values intervention could be fully distinguished from the impact of other interventions. One underpowered study (Kelly & Stone, 2004) reported no significant advantage of adding a values clarification group to an anxiety management intervention. The 13 studies provide some converging evidence to support the use of values-based interventions. The following discussion provides a critique of the evidence and considers the extent to which the results can be generalised.

**Table 2: Values-based intervention studies**

<b>Study</b>	<b>Design</b>	<b>Intervention</b>	<b>Participants</b>	<b>Outcome measure/tools</b>	<b>Results</b>
Branstetter-Rost et al., 2009	Experimental: 3 independent samples	Acceptance, or acceptance plus values, or no intervention	99 undergraduates, 88% white, 61% F, mean age 19. USA.	Time tolerating cold pressor	Participants in the values condition tolerated pain for significantly longer ( $p < 0.001$ ), despite significantly greater pain ( $p < 0.001$ , explained by longer duration in the cold pressor).
Páez-Blarrina et al. 2008	Experimental: 3 independent samples	Considering a personal example of values-based tolerance of pain, or when pain had blocked valued actions, or no intervention	30 undergraduate students, 70% F, mean age 23 (range 18-31), Spain.	Completion of a laboratory based pain task (electric shocks)	Significantly more participants in values group completed the task, relative to both other conditions (which did not significantly differ; $p < 0.05$ )
Edwards & Allen, 2008	Clinical: repeated measures	Group discussion of VC vignettes, 1 hour/week for 24 weeks	48 pregnant teenagers and young mothers. Modal age 16 (range 14-17), predominantly Black, all students. USA	Acceptance of pro-social versus anti-social values	Significant reduction in self-reported acceptance of illicit drugs and lying ( $p < 0.001$ ), and violence ( $p < 0.05$ ); significant increase in valuing of education and employment ( $p < 0.001$ ), and in valuing of trust, family, and honesty ( $p < 0.05$ ).
Heffner, Eifert & Parker, 2003	Single case study	21 sessions of values-focussed ACT, using values assessment narrative	Middle aged white unemployed man with alcohol dependence, USA	Percentage of days sober, outcome questionnaire	Achieved nearly 100% sobriety at treatment week 10, from 0% at the start. Was below clinical cut-off in the outcome questionnaire at termination.
Hirose, 2004	Experimental: 2 independent samples	Participants rated anticipated personal pleasure or (control) gender inequality in actualising 20 values	140 female undergraduates, aged 18-20. Japan	Rating the importance of each value as a guiding principle in their life	Experimental group changed ratings for 15 values (4 maintained at three-month follow-up); control group changed ratings of 5.

Study	Design	Intervention	Participants	Outcome measure/tools	Results
Kelly & Stone, 1987	Clinical: 3 independent samples	AM, either alone or plus 6xCBT or plus 6xVC.	31 participants with Type A behaviour pattern. 52% F, mean age 38, USA	State-trait anxiety inventory, Type A behaviour pattern	All groups reduced anxiety and Type A behaviour patterns (overall: $p < 0.01$ ). VC+AM did not significantly differ from AM alone
Oldhe & Vinitsky, 1976	Clinical: 2 independent samples	Seven hour workshops: VC versus communication skills	60 undergraduate students (66% F), undecided in major field of study. 30 high and 30 low self esteem, USA	Values awareness, derived from occupational values survey	VC group significantly increased values awareness ( $p < 0.01$ ), self esteem did not affect results.
Wicksell, Dahl, Magnusson & Olsson, 2005	Single case study	13 sessions of valued life directions focussed ACT	14 year old girl with idiopathic arthritis, Sweden	Self-selected goals, school attendance, functional ability	Fully achieved all self-selected goals, full school attendance (prior absence of 10 weeks), and substantial increase in functional ability
Lundgren, et al, 2008	Clinical study: 2 independent samples	9 hours of ACT plus behavioural seizure management, or 9 hours supportive therapy. 2 group sessions, 2 individual sessions.	27 impoverished institutionalised South African men with epilepsy, aged 21-55.	VBL measured by Bull's eye (see page 23), psychological flexibility, number of seizures, quality of life	ACT resulted in significant seizure reduction, and improvements in quality of life and VBL ( $p < 0.001$ )  VBL correlated significantly with ( $p < 0.001$ ) <i>and mediated change in</i> ( $p < 0.05$ ) seizure reduction, improvements in quality of life, and wellbeing from pre-intervention to one-year follow-up.
Vowles & McCracken, 2008	Clinical study, repeated measures	4 weeks of daily ACT, (including values clarification exercises), in addition to physical rehabilitation interventions.	171 UK patients in a tertiary care pain rehabilitation unit, 64% F, mean age 47. 76% unemployed.	Chronic pain values inventory, depression, pain related anxiety, physical disability	ACT resulted in significant increases in VBL post-treatment, maintained at three month follow up.  Change in VBL significantly negatively correlated with depression, pain related

Study	Design	Intervention	Participants	Outcome measure/tools	Results
					anxiety and difficulty with a physical task post-treatment ( $p>0.05$ ), and negatively correlated with pain intensity ( $p<0.01$ ), depression, physical and psychosocial disability, and pain related anxiety ( $p<0.001$ ) at follow up.
Cohen, Garcia, Apfel & Master, 2006	Experimental: 2 sets of 2 independent samples	Values-affirmation: ranked values. Either wrote why most important value matters to them or why least important value matters to others.	Two samples of 7 <sup>th</sup> grade (12-13 yrs) students: 133 (40 Black, 61 White) and a replication sample of 149 (69 Black and 63 White). 52% F. USA	Mean grade point average	Grades of Black values-affirmed students improved significantly (mean=0.26 & 0.34 of a grade higher; $p<0.05$ & $p<0.01$ respectively). White values-affirmed students did not significantly benefit. Racial achievement gap reduced by 40%.
Creswell et al. 2005	Experimental/laboratory: independent samples	Values-affirmation: ranked values then answered values questionnaire for most (versus least) important value	85 undergraduate students, 63% F. Mean age 19.5 (range 17–33) 56% Asian, 21% Caucasian, 6% Latino, 17% "other". USA	Cortisol response to stressful laboratory task	Values-affirmed participants had significantly lower cortisol response to stress ( $p<0.05$ immediately after stressful task and 45 minutes later).
Crocker et al., 2008	Experimental: independent samples	Values-affirmation: as for Cohen et al	139 students, 56% F. Mean age 18.8 (range 17–21) 71% White, 14% Asian, 15% "other/mixed".	Self-report Likert ratings of experience of 18 feelings (joyful, sad, proud, etc)	Values-affirmed participants reported significantly more positive "other-directed" feelings, e.g. love, than control participants ( $P_{rep}>.99$ ). In a separate study, this increase accounted for increased acceptance of threatening health message.

Abbreviations as follows: F=female; VBL=values-based living; VC=Values Clarification; AM=Anxiety management; CBT=cognitive behavioural therapy; ACT=Acceptance and Commitment Therapy,  $P_{rep}$  = probability of replication.



## **Values-based interventions to provide motivation for adaptive acceptance of distress**

The acceptance of distress in order to move in one's valued direction is a key concept in ACT (Hayes, et al. 1999), and may be important in any therapeutic approach if a client is to persist with therapy in the face of difficulties. Two analogue studies measured the impact of values-based interventions on the motivation to tolerate pain in a laboratory task (Branstetter-Rost et al., 2009; Páez-Blarrina et al., 2008). Such studies provide a proxy of values-based action in the face of distress or discomfort.

The values interventions used in the two studies differed in process and content. Branstetter-Rost et al. required all participants to rate their most and least important value from the VLQ (Wilson et al., in press, see page 8). They gave two groups an acceptance-based coping strategy, one of which had an additional values component: imagining that they were accepting the pain in the service of their most important value (e.g. swimming in icy water to rescue their family).

By contrast, the values intervention developed by Páez-Blarrina et al. was designed to provide a personally relevant values-based motivational context for participating in the study. They tested the effects of a strategy-consistent values manipulation prior to providing either an acceptance-based or a suppression-based coping strategy. The acceptance group was informed that the research goal was “to understand how people do keep their life even when feeling pain” (p. 88), and participants were asked to name occasions when they had persisted with valued goals despite pain. Páez-Blarrina et al. thought that this values manipulation would undermine the suppression strategy, which they considered places pain as incompatible with persistence with valued goals.

The suppression group was therefore informed that the research goal “to understand why people have to give up doing some activities when they feel pain” (p. 89), and they were asked to name occasions when they had given up on valued goals due to pain.

Both analogue studies reported that establishing pain as part of a valued action resulted in significantly higher pain tolerance, relative to both other control groups. Páez-Blarrina et al. explicitly controlled for duration and language in their instructions, whereas Branstetter-Rost et al. provided their acceptance-plus-values group with an additional instruction. However, Branstetter-Rost et al.’s acceptance-plus-values group tolerated the painful stimulus for more than twice as long as the acceptance-alone group (mean tolerance of 156 seconds versus 69 seconds); a difference unlikely to be accounted for by simple differences in instruction duration. More critically, the Páez-Blarrina et al. results were confounded by the implicit message in the instructions that the aim of the study for the experimental group was to persist whilst the aim of the study for the control group was to give up. Nevertheless, Páez-Blarrina et al.’s acceptance-plus-values group also tolerated significantly more shocks than the no-intervention group, which suggests that encouraging a person to reflect on times when they have been able to persist in the face of pain can increase tolerance of distress.

Both studies involved a non-representative sample of young, primarily female undergraduate students from Spain and the USA, which limits the extent to which the results can be generalised. Furthermore, the use of acutely painful but essentially avoidable stimuli as an analogue for “real-life” pain or distress has certain limitations: it may be easier to accept an acutely painful stimulus that you know you will survive

and can escape. However, Branstetter-Rost et al. report a strikingly significant increase in pain tolerance, despite an increase in pain sensation, following a very simple 2-minute imagery exercise. Their study provides promising evidence that values can, at least in some circumstances, act as a motivation to persist in the face of physical or psychological barriers.

### **Values-based interventions to clarify values and increase value-based action**

Six studies pertained to the use of values-based interventions to clarify values and increase values-based living: three values-clarification groups (Edwards & Allen, 2006, Kelly & Stone, 1987, Oldhe & Vinitzky, 1976), one values clarification experiment (Hirose, 2004) and two case studies (Heffner et al., 2003, and Wicksell et al., 2005).

Five of the six studies reported increased clarity or strength of values, and/or increased values-based living and the achievement of values-based goals management following the values-based intervention. In the remaining study by Kelly and Stone the effects of anxiety management plus a values-based intervention did not significantly differ from anxiety management alone. However, the implications of this result for values clarification as an intervention is unclear, because their sample of 31 participants split into 3 groups provides an under-powered test of even a large effect size (Cohen 1962).

The values-clarification techniques used differed substantially in length and focus. Hirose (2004) provided a clear and replicable description of a simple imagery-based values clarification intervention, which would be easy to translate into a therapeutic context. However, the experimental group was not statistically compared with the control group. Some of the other interventions were less replicable.

Edwards and Allen (2008), Hirose (2004) and Oldhe and Vinitzky (1976) all reported an increase in personal values awareness following the values-based intervention. Kelly and Stone incorporated explicit behavioural change commitments into their values clarification intervention, but their outcome measures were standardised Type "A" behaviour ratings and anxiety. No studies explicitly measured actual behavioural change, and Hirose (2004) was the only study to provide follow-up data.

There is some diversity of participants in the four studies: three involved young students but they were from different cultural backgrounds. Erikson (1959) conceptualises this life stage as one of identity clarification: values clarification may therefore be more beneficial at this stage than for older groups. All four studies provide some evidence of values clarification and attitude change, with some diversity of participants and methodology. However, it is unknown whether this clarification of values translated into lasting change in actual behaviour.

Two case studies (Heffner et al. and Wicksall et al.) reported the impact of values-focused ACT upon valued goals; both achieved an impressive increase in values-based living following the intervention. There was a clear dominance of values work within the interventions, although the ACT framework within which the therapy was situated may have had a significant impact. The values-based outcome measures were given as actions or achievements (e.g., percentage of days sober, attend P.E. Class), hence providing concrete evidence of change. However, the wider impact of this change upon well-being was not clearly measured. Heffner et al. used the Outcome questionnaire, but did not report pre-therapy measures. Wicksell et al. reported a

substantial decrease in measures of pain, avoidance and functional disability following the intervention, but statistical analysis of this change was not provided.

Case studies generalise to theory rather than to populations (Yin, 1994); nevertheless it is positive that the two clients are substantially different. The case studies provide some support that values-focussed ACT can be useful in increasing values-based living.

In essence, the six studies provide some evidence that values-clarification and values-focused ACT can improve clarity of values and increase values-based living. The variety in methodology and some diversity of participants strengthens this conclusion. However, the unique contribution of the values intervention is unclear in some of the studies because they either provided an uncontrolled repeated measures values clarification group as part of a wider educational programme (Edwards & Allen), or used values-based interventions within a wider therapeutic philosophy (Heffner et al. and Wicksall et al.). The specific mechanisms of change need further research. Furthermore, none of the studies measured whether this increase in values clarity and/or values-based living resulted in increased well-being: this is considered in the following section.

### **Interventions to increase values-based living and increase well-being**

Lundgren et al. (2008) and Volwes and McCracken (2008) present evidence that an increase in values-based living following ACT correlates with and mediates the improvement in psychosocial and physical function. They used different designs (independent samples versus repeated measures) and different populations, although both within a health setting. Lundgren et al. compared 9 hours of ACT with 9 hours of

supportive therapy, for 27 underprivileged, institutionalised South African men with epilepsy. Volwes & McCracken provided approximately 30 hours of ACT to 171 UK patients with chronic pain. Lundgren et al. suggest that in the context of deprivation a short intervention may have large effects.

Neither study used ACT alone, also providing either behavioural strategies (Lundgren et al), or full pain rehabilitation (physical conditioning, activity management and health education; Volwes & McCracken). Both studies separated the effects of the values-based results from other results by using a values-based living process/outcomes measure: the Chronic Pain Values Inventory (Vowles & McCracken; described on page 8) and the Bull's Eye (Lundgren et al.). The Bull's eye is a visual depiction of values as a series of dartboards, upon which clients are invited to mark how close to their valued life they are living (where the bull's eye represents living in full accordance with that value).

Both studies reported an increase in values-based living following ACT. Lundgren et al. reported that change in values attainment and persistence in the face of barriers was significantly greater for the ACT group than for the supportive therapy group. Vowles and McCracken reported that values-based living was significantly greater at post intervention and at follow up than at pre intervention. Furthermore, both found significant positive correlations between change in values-based living and measures of function and quality of life. Both studies reported follow up data: Vowles and McCracken at 3 months and Lundgren et al. at one year. Vowles and McCracken reported at follow-up that the relationship between change in values-based living and change in measures of mood had strengthened. They also reported additional

significant negative correlations between change in values-based living and change in pain intensity, and physical and psychosocial disability. The functional improvement in values-based living was therefore not only robust over time but actually increased.

Vowles and McCracken conducted multiple linear regressions to investigate the unique and combined contributions of changes in acceptance and in values-based living upon their outcome measures across their treatment and follow-up intervals. They report that acceptance-based change dominated the variance in improvement during treatment. However, in the follow-up interval, values-based living change accounted for a significant proportion of the variance in pain intensity, in depression, and in physical and psychosocial disability. Vowles and McCracken obtained significant results across multiple domains with participants who had long standing problems: these results would be difficult to attribute to demand characteristics or the passage of time. However, participants also had physical and educational input in addition to ACT as part of the treatment programme, and the results would therefore be strengthened by the inclusion of a control condition. Despite this limitation, their regression analyses indicate that changes in values-based living significantly contributed to overall improvement.

Lundgren et al. performed formal mediation analyses on their results, using the stringent cross-products test (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002). They reported that values attainment and persistence in the face of barriers mediated the change in seizures, quality of life, and well-being, and that changes in values-based living had a direct impact on seizures that was not merely a side-effect of reduction in general distress. Although mediation does not prove causation, the results provide

convincing evidence that an increase in values-based living can reduce seizures and increase well-being.

Both author groups highlight the non-generalisability of their samples, which comprised predominantly unemployed participants in residential settings with chronic health problems. Despite these similarities, the two samples significantly differed in other respects, such as deprivation and gender. More research is required to investigate whether populations who are not limited by health conditions would similarly benefit.

It seems likely that two main change processes, increase in values-based living and increase in acceptance of distress, correspond respectively to the values and acceptance interventions used in ACT. However, this has not been proven, and both studies also involved additional interventions such as behavioural seizure management strategies. Notwithstanding these limitations, the two studies offer convincing evidence that the process of increasing values-based living made a unique, significant and enduring contribution to the increase in quality of life and decrease in disability.

### **Values-affirmation interventions to increase tolerance of threats to self worth**

Self affirmation theory posits that threats to the self can be tolerated more easily if one responds by affirming aspects of the self that are unrelated to the threat, such as one's values (Sherman & Cohen, 2006). There is a large literature regarding self-affirmation, which will be only briefly considered here. The interested reader is directed towards Sherman and Cohen (2006) for theory, and McQueen and Klein (2006) for a review of the evidence.



Three studies met the inclusion criteria. They comprise one study on the effects of values-affirmation on academic grades (Cohen et al., 2006) and two studies of the processes involved in values-affirmations: a reduction in stress responses (Creswell et al., 2005) and an increase in self transcendence (Crocker et al., 2008).

Cohen et al. (2006) asked 282 7<sup>th</sup> grade (12-13 year old) students to rank a list of value domains (e.g., relationship with friends and family), and then write either why their most important value matters to them or why their least important value might matter to others. Cohen et al reported significantly improved academic grades in Black students, and no significant gains for White students, reducing the racial achievement gap by 40%. The results cannot be explained by demand characteristics: the intervention was incorporated into a normal lesson, and teachers were blind to students' conditions.

Cohen et al. explain their results thus: the intervention interrupted a negative recursive cycle in which psychological threat and poor performance interact with and exacerbate each other. That is, the psychological threat presented by the academic environment causes performance to decline, which in turn increases the psychological threat, thereby further reducing performance, and so on. Academic performance was presented as a function of time: Black students in the affirmation condition show an increase immediately after the intervention, whereas those in the non-affirmation condition show a decrease over the time period. Cohen et al. suggest that a small decrease in psychological threat leads to a positive recursive cycle, which even if providing only a small change on each assignment results in a significantly improved grade point average. It is interesting that the White students experienced no measured

benefit from the intervention. Other research involving more diverse populations and alternative outcome measures are needed to determine whether this intervention would be useful with other populations who experience psychological threat.

Creswell et al. (2005) demonstrated that values-based self affirmations can act as a “buffer” to reduce cortisol stress responses. Students completed the Values Questionnaire (Allport et al., 1960), which involves ranking personal values and then answering questions related to their top-rated (experimental condition) or bottom rated (control condition) value. Students in the affirmation condition had significantly lower levels of salivary cortisol in response to a stress task than those in the control condition. The study was well controlled, although participants may not have been blind to their experimental condition and/or possibly the research hypotheses. However, cortisol levels are unlikely to be directly subject to demand characteristics.

Crocker et al. (2008) suggested that values affirmation reduces defensiveness via self-transcendence. Participants followed the same affirmation procedure as described by Cohen et al. (2006), and then rated how they had felt during the task. Values-affirmed participants reported greater levels of positive “other-directed” feelings such as love. In a second study, Crocker et al. reported that increased feelings of love mediated the increased acceptance of self-threatening information. However, there was very little overlap in ratings of loving between the control group and the values affirmation group, so the inclusion of “loving” in the analysis removes most of the variance resulting from the experimental condition. Crocker et al.’s results suggest that positive other-directed feelings are associated with the increased acceptance of threat, although this is not evidence of causality.

The participants for all three studies were North American students with a mean age of under 20. The ethnic diversity of the participants is a strength of the literature, and two studies had a reasonable gender balance. Cohen et al. measured a long term effect of the affirmation task, whereas the other two studies only reported immediate effects. The three studies reported that values-affirmation results in temporary reductions in cortisol, increased positive other-directed feelings, increased tolerance of threat, and improved grade averages. It is likely, although untested, that increased other-directed positive feelings would be accompanied by reduced cortisol (Henry & Wang, 1998). This state may enable a person to transcend their feelings of self-threat (e.g. from the academic environment), and act in a way that is more conducive to achieving long term goals or valued directions. All three studies indicated that consideration of one's values is beneficial; however, further research with different populations is required to determine whether these effects can be generalised.

### **Summary**

The 13 studies provide converging evidence that values-based interventions can benefit populations with diverse needs. Values have been used to increase motivation to persist despite physical or psychological barriers. Specific interventions have been demonstrated to enable values clarification and increase values-based living. An increase in values-based living has been demonstrated to improve quality of life and reduce disability. Furthermore, consideration of one's values has been demonstrated to reduce cortisol and increase connectedness with others, enabling a person to step back from the immediate situation and better cope with psychological threats without defence.

## **Conclusions and future directions**

The aim of this literature review was to evaluate the evidence linking the clarification of values to well-being, and evaluate the evidence that values and values-based living comprise beneficial therapeutic tools and processes. The theoretical background depicted values-clarification as both a process and an objective of therapy, which would be predicted to increase well-being via an increase in values-based living. Values were perceived as motivators that justify the hard work of therapeutic change, provide direction and reinforcement, and enable one to withstand the threat of change by reducing defensiveness.

Nineteen studies were identified that fitted the inclusion criteria. Eight studies reported a correlation between values-based living and well-being. Two studies supported the concept of values as motivators to withstand physical pain, although one of these was undermined by a significant methodological confounder. Four studies provided evidence of values clarity or change following a values clarification intervention, although they did not measure whether this resulted in increased values-based living or well-being. Two case studies indicated that a values-based ACT intervention can increase values-based living; an association with increased well-being appears likely although was not specifically measured. Two well-described studies convincingly demonstrated that an increase in values-based living following ACT mediates a reduction in disability and an increase in quality of life. Finally, three studies indicated that the process of affirming one's own values reduces defensiveness and enables one to more effectively cope with psychological threat.

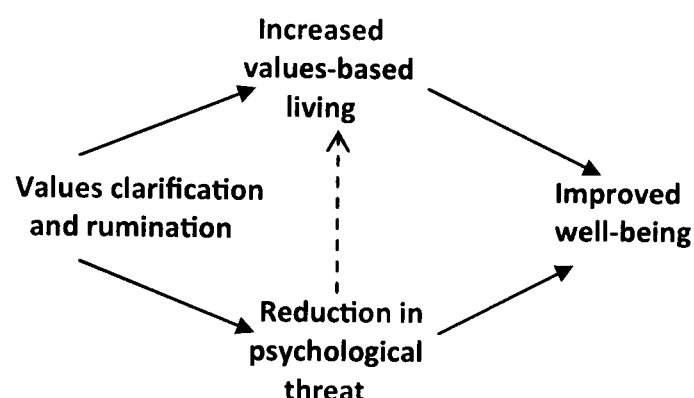
The generalisability of the literature is questionable. The majority of participants were students or people with chronic health conditions. Further research with more diverse populations is required in order to investigate whether values-based interventions would be useful for clients in generic mental health or therapeutic settings.

The literature included several tools and strategies for measuring and increasing values-based living. These include the CPVI, VLQ and Bull's Eye, as well as therapeutic experiential interventions (such as encouraging clients to imagine their funeral or 85<sup>th</sup> birthday and “listen” to what attendees said about the way in which they lived). The relative benefits of one technique over another have not been investigated, and it is unknown which of these if any would be beneficial if used simply as an addendum to a different therapeutic approach. The detailed consideration of these tools is outside the remit of this review (see Dahl et al. (2009) for more information).

All but one of the 19 papers indicated either a significant correlation between values-based living and well-being or significant support for a values-based intervention; the remaining (underpowered) paper indicated that values clarification did not make a significant unique contribution to improvement. The finding of only 19 papers after half a century's research is surprising. Whilst there may be many explanations for this, it is a well-known limitation of scientific reporting that there is a publication bias towards studies with significant results (Scargle, 2000). Whilst the published literature shows strong support for values-based interventions it is possible that studies that did not replicate this result were not published.

The way in which the self affirmation literature interacts with the remainder of the values literature review herein is interesting. The other approaches fit neatly into the premise that if a person is clear about their values and enabled to live in accordance

Figure 1: A model of processes by which values interventions could improve psychological well-being



with them they will experience greater well-being. The self affirmation literature portrays reflecting on values as aiding well-being by reducing psychological threat/defensiveness. This would suggest that values work in therapy could provide a supportive and affirming context in which the aversive message of change is more accepted. The two routes are shown in Figure 1. The current evidence supports both paths, suggesting that the therapeutic consideration of values might act to increase values-based living, *and* reduce defensiveness. The two processes may furthermore support each other: a process that enables one to step back from the immediate situation and better cope with psychological threats without defence might be extremely beneficial to enable one to persist with therapy and other valued goals in the face of barriers such as distress. Further research is required to investigate these processes.

The theoretical conceptualisations of values outlined at the start of this review appear to be borne out by the evidence. There is promising evidence to support the therapeutic use of values-based interventions to increase motivation and decrease defensiveness. There is furthermore evidence to support increased values-based living

as a therapeutic goal. However, the current literature is significantly limited by small numbers of studies and limited generalisability outside the populations of students and people with chronic health conditions. Further research in this exciting area is needed to provide stronger evidence to further evaluate the therapeutic use of values-based goals and interventions, and to clarify the mechanisms by which values-based interventions can be used to therapeutically assist in a client's struggle to find meaning.

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**Values-based self-affirmation for young people who  
experience skin-related distress**

## Abstract

A multiple case studies approach was used to evaluate a values-based self-affirmation intervention for young people with psychosocial distress self-attributed to their dermatological condition. Eleven participants (aged 11-20) provided standardised mood ratings (pre-intervention, post-intervention and two follow-ups), idiographic daily repeated measures (for 3 weeks pre-and post-intervention), and qualitative reports to evaluate the intervention.

Depression and anxiety reduced significantly at the group level ( $p < 0.05$ ), which was maintained at follow-ups. Most participants ( $N=7$ ) reported statistically reliable improvements in anxiety and/or depression. Daily ratings of skin-related frustration and restrictions reduced post-intervention, whilst reported preoccupation and concealment behaviours increased. Qualitative data indicated that participants increased their values-based actions ( $N=7$ ) and experienced lower levels of skin-related threats to self worth ( $N=5$ ) post-intervention. The long-term impact of values-based self-affirmation may therefore include both maintained self-integrity *and* increased values salience. Most participants did not directly attribute improvements to the self-affirmation intervention, but instead identified the opportunity to discuss their skin-related distress as the most significant component.

Skin-related distress in young people can hence be reduced by a brief, ACT-consistent, psychosocial intervention that could be implemented by nursing staff within a primary care setting. Further research is required to clarify the active components and mechanisms of change.

## Introduction

Some people with visible dermatological conditions experience psychosocial difficulties as a result of these conditions, which can lead to isolation and social anxiety (Bessell & Moss, 2007; Gupta & Gupta, 2003; Thompson, 2005; Thompson & Kent, 2001; Walker 2005). Young people may be particularly affected because they may be more susceptible to overt bullying than adults, and they may not have developed sufficiently strong self-concepts or strategies to withstand negative attention (e.g. Walters, 1997). A visible dermatological condition may exacerbate transitions-related pressures, (Lansdown, Lloyd & Hunter, 1991), and young people are subject to many transitions in social and support groups. Furthermore, adolescence is an important time for self-image development (Richardson 1997), and real or perceived negative reactions may significantly affect personality development (Thompson, 2009).

Many chronic dermatological conditions are psychophysiological: the condition is exacerbated by psychosocial stressors, resulting in a vicious cycle (Thompson, 2009). Dermatological conditions in children and adolescents may also result in “secondary” psychological difficulties, with lower quality of life and self-esteem, and poor body image (Rumsey & Harcourt, 2007; Thompson, 2009; Titman, 2005). Children with atopic eczema and adolescents with acne have significantly higher shame, depression, anxiety, social isolation and self consciousness than those without (Absolon, Cottrell, Eldridge & Glover, 1997; Smithard, Glazebrook & Williams, 2001). The psychosocial burden of psoriasis is so great that in one study 11% intended to avoid having children in case they inherited the condition (Ramsay & O’Reagan, 1988).



People with dermatological conditions often experience negative reactions to their appearance from others (Walker & Papadopoulos, 2005). People can be less friendly and less helpful towards people who are visibly different, and judge them more harshly (Grandfield, Thompson & Turpin, 2005; Rapp, Cottrell & Leary, 2001). Negative treatment may be due to concerns about contagion, uncertainty about how to act, beliefs about social status and unattractiveness, and/or maintenance of a “just world” hypothesis, in which disadvantages such as disfigurement are perceived to have been somehow deserved (Thompson & Kent, 2001).

Fear about this negative evaluation by others mediates the association between clinical severity and distress (Leary, Rapp, Herbst, Exum & Feldman, 1998) and can result in hyper-vigilance for indications of potential rejection (Fortune, Richards & Griffiths, 2005). Experimental evidence indicates that people who believe they look visibly different negatively misinterpret other's reactions (Kleck & Strenta, 1980). Previous negative experiences or beliefs may lead a person to anticipate and judge attention as negative irrespective of “reality”, leading to social misunderstandings and defensive, avoidant or pre-emptively rejecting behaviour that then reinforces negative social expectations. This might lead to a negative recursive cycle whereby negative social interactions and psychological defensiveness against the threat of social judgement maintain and exacerbate each other.

Papadopoulos and Bor (1999) describe various forms of coping with dermatological conditions, many of which restrict the person's life choices and ability to live for the present. These include avoidance strategies such as modifying clothing and behaviour to conceal the condition, or starting to live for “when it gets better”. Avoidance and

concealment strategies have been associated with poor adjustment (e.g. Kent, 2002; Rapp et al., 2001), loss of valued activities and reduced social interaction (Kent, 2000).

The dominant intervention model for visible difference is biomedical, which often focuses on trying to make people look “normal” (Rumsey & Harcourt, 2007). Techniques include surgery, pharmaceutical interventions, and camouflage make up. Successful interventions result in improved self confidence and mood (Tan, 2004). However, difficulties associated with trying to alter one's appearance in order to be accepted include over-reliance on concealment, disappointment in imperfect treatment, and reinforced beliefs that one is not otherwise acceptable (Rumsey & Harcourt, 2007).

Psychosocial interventions for skin-related distress include self-help materials, social support groups, social skills training and Cognitive Behavioural Therapy (CBT) interventions: evidence to support their use is limited (Bessell & Moss, 2007; Thompson & Kent 2001). Interventions specifically targeting children and adolescents have had some success, including an intensive social skills programme and school-based interventions to target bullying (Blakeney et al., 2005; Lovegrove & Rumsey, 2004). However, evaluation research in this area is limited (Ersser, Latter, Sibley, Satherley & Welbourne, 2007). Psychosocial support is not routinely provided for young people with skin-related distress (Rumsey & Harcourt, 2007).

One potential theoretical explanation for skin-related psychological difficulties is that looking different threatens a person's “self-integrity”, that is, one’s belief that one is appropriate and culturally acceptable (Steele, 1988). A visible difference could

threaten self-integrity due to “perceived failures to meet culturally or socially significant standards” (Sherman & Cohen, 2006, p.7). People are theoretically motivated to protect their self-integrity against such threats, even if it reduces their adaptive responses to real-world contingencies. That is, a person may be so motivated to protect their self-integrity that they try to avoid all threatening situations, perhaps including any social situations in which they may be seen and feel judged, even when this is not adaptive (Sherman & Cohen, 2002).

Sherman and Cohen (2006) suggest three ways of dealing with threats to self-integrity: one can accommodate to the threat, or try to reduce it either directly through amelioration or indirectly through self-affirmation. Accommodation involves attitudinal or behavioural change: in this context it would include biomedical dermatological cures, or genuine personal acceptance of the condition. However, biomedical cures are rarely perfect (Rumsey & Harcourt, 2007), and the need to maintain self-integrity can make such acceptance difficult without significant help. Amelioration involves attempts to deny or disguise either the visible difference itself, through concealment and avoidance, or the associated interpersonal difficulties, perhaps through pre-emptive rejection of others (e.g. “I don’t need them anyway!”). These approaches are often associated with negative outcomes, as discussed above.

Self-affirmation enables both the maintenance of self-integrity and adaptive behaviour, by reducing the extent to which self-worth is considered dependent upon the immediate threat. The self is affirmed through reflection upon personal values or important aspects of one's life that are unconnected to the threat. This reduces the need for defensiveness by expanding the available self-concept and increasing the

salience of other sources of self worth (Sherman & Cohen, 2006). A hypothetical case example is “Jack”, who feels threatened by strangers seeing his vitiligo<sup>3</sup>. He tends to ameliorate this threat by avoiding social contact. Reflection on his non-appearance related values (e.g., I am a caring brother, a good sportsman) could enable Jack to tolerate the threat of social contact whilst still maintaining his belief that he is an appropriate and worthy person.

Self-affirmation could therefore theoretically enable people to deal with the hypothesised threat to self-integrity posed by dermatological conditions. Self-affirmation is particularly appropriate when the cause of threat cannot be changed, as it helps a person to realise their own resources and enables adaptive acceptance. Many self-affirmation interventions require little time or financial resources, and hence could be made widely available to the large numbers of young people with skin-related distress.

Self-affirmation studies typically involve reflecting on how one lives in accordance with one's most important values, either via essay writing or answering values-related questions such as those in the Values Questionnaire (Allport, Vernon & Lindzey, 1960; McQueen & Klein, 2006). The effects of self-affirmation have included reduced rumination on failures (Koole, Smeets, van Knippenberg & Dijksterhuis et al., 1999), reduced perceived stress and increased health (Cresswell et al., 2007), reduced impact of low self-esteem upon self-presentation and social comparison (Spencer, Fein & Lomore, 2001), improved academic grades in Black students (Cohen, Garcia, Apfel & Master, 2006), and increased tolerance of threatening but useful health information

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<sup>3</sup> A glossary of terms is provided in Appendix E

(Harris & Napper, 2005). This evidence suggests that self-affirmation could benefit people with skin-related distress. For example, an increased ability to tolerate, without defensiveness, threatening but potentially (socially) useful situations such as a person asking about one's skin condition could reduce social avoidance.

The processes underlying self-affirmation include a reduction in neuroendocrinal cortisol response to stress and an increase in positive other-directed feelings such as love and connectedness (Cresswell et al., 2005 and Crocker, Niiya & Mischkowski, 2008 respectively). These may comprise the same underlying mechanism: an increase in other-directed positive feelings is likely to be accompanied by a reduction in cortisol (Henry & Wang, 1998). This state may enable a person to transcend their feelings of threat and choose actions more conducive to their valued directions. For example, the emotional and neuroendocrinal consequences of reflection on personal values regarding relationships or sport could help "Jack" to feel brave enough to risk social contact, perhaps in the service of these values.

Cohen et al. (2006) suggested that self-affirmation improved academic grades in Black students by interrupting a negative recursive cycle whereby psychological threat and poor academic performance exacerbate each other. They found that self-affirmation had no impact on White students, which they explained in terms of higher levels of threat within the academic environment for Black students relative to White students. They suggest that reduced psychological threat leads to a positive recursive cycle, which by provoking a tiny change on each assignment could significantly improve grade point average. Populations who experience psychological threat from perceived responses to their physical appearance could hypothetically benefit from self-

affirmation in a comparable manner: reduced threat afforded by self-affirmation may decrease the anticipation of a negative social interaction, and enable the person to interact less defensively. For example, “Jack” may anticipate social rejection and hence act in pre-emptively rejecting ways. When self-affirmed, he might risk making eye contact or being slightly more friendly, and therefore may experience others responding in a similarly positive fashion. Numerous slightly more positive interactions could have cumulative effect in increasing his well-being.

Values-based self-affirmation potentially overlaps with Acceptance and Commitment Therapy (ACT), which has been used successfully with people with chronic skin picking (Flessner, Busch, Heideman & Woods, 2008). ACT aims to help clients to live in the present, accepting unwanted thoughts and feelings in the service of values-based actions (Hayes, Strosahl & Wilson, 1999). Self-affirmation *could* be used ACT-inconsistently to try to control or reduce unwanted thoughts and feelings (Koole & van Knippenberg, 2007). However, it could alternatively enable a person to withstand their unwanted thoughts and feelings by increasing the salience of values-related motivations (Newton, 2009). Values-based self-affirmations may also increase a person's clarity about their values, which can increase values-based living and improve well-being (Newton, 2009).

The two processes of increased values-based living and decreased defensiveness may well support each other. Bolstered by self-affirming reflections on his values and enabled to better cope with psychological threats without defence, “Jack” might be willing to experience his fears around social rejection in order to act on his values around sport and relationships.

Self-affirmation also has conceptual links with the self-complexity buffering hypothesis described by Linville (1987), which contends that greater self-complexity is protective against stress. Values-based self-affirmation involves accessing positive self-representations defined by personal values, and could therefore increase the complexity of self-representations: becoming more than just the object of (perceived) negative attention or bullying. This is significant because Kent (2005) suggests that dermatological problems can take on “master” status in an individual, with all other characteristics and aspects of the person being considered secondary. Values-based self-affirmation could enable “Jack” to remember his worth as a brother or teammate, and perceive that he is more than just his vitiligo.

Self-affirmation could therefore comprise a low intensity intervention that could reduce the psychosocial difficulties experienced by young people with visible skin conditions, and enable them to lead more satisfying values-based lives. Both self-affirmation theory and the values literature would predict reduced avoidance behaviours and increased quality of life following self-affirmation, by helping the person to tolerate threats that might otherwise act as a barrier to valued and enjoyed activities. The self-complexity buffering hypothesis would further predict reduced stress and improved mood.

The current literature indicates an increased ability to tolerate threats following self-affirmation, but shows a mixed picture regarding the effects on mood (McQueen & Klein, 2006). This may be due to the methodologies used: predominantly laboratory-based, involving participants without particular psychosocial difficulties, and using manipulated, short-term threats and short-term outcomes (McQueen & Klein, 2006).

The mechanisms of change suggested by the values literature and the recursive cycle model (Cohen et al., 2006) would predict a significant incubation period for real life effects on mood or behaviour. That is, effects may be cumulative over time, with the full impact of the intervention not immediately apparent. This is demonstrated by Cohen et al. (2006) using time series data, which enables the exploration of the shape of psychotherapeutic change (Barkham, Stiles & Shapiro, 1993). Further research using time series could usefully investigate the pattern of change associated with self-affirmation.

Self-affirmation may also be most appropriately considered within the context of the individual and the threats to self that they are experiencing, because the impact of a skin condition varies significantly between individuals (Rumsey & Harcourt, 2007) and because self-affirmation is theoretically only useful to those who experience psychological threat (Cohen et al., 2006). Research examining individual differences is important, so that variables that contribute to the success or otherwise of the intervention are not hidden in a group mean. The intervention can then be targeted at those who are likely to benefit.

Case study methodology can include time series data and enables analysis at the individual level as well as potentially at the small-N group level. Case study methodology is also particularly suitable for exploratory research in fields where there is an absence of established clinical guidelines (Yin, 2003).

## **Summary**

Dermatological conditions can have a considerable social and psychological impact,



and can result in social avoidance, low mood and reduced quality of life. Psychosocial support for this group is not routinely provided, and there is yet to be developed a suitable intervention to ameliorate the negative psychosocial impact of these conditions. Self-affirmation theory posits that threats to the self can be tolerated more easily if one responds by reflecting on affirming aspects of the self that are unrelated to the threat, such as one's values. A variety of studies have indicated encouraging results. Self complexity theory and the values literature provide further theoretical support for self-affirmation interventions as potentially beneficial. As time series and individual data appear suited to this relatively new area of research, it is appropriate to investigate effects using multiple case studies.

## **Aims and Hypotheses**

The aim of this research is to develop and evaluate a self-affirmation intervention for young people with psychosocial difficulties self-attributed to dermatological problems.

The main hypothesis is that participants will report significant and lasting improvements in well-being and in ratings of skin-related distress following self-affirmation. This hypothesis is split into sub-hypotheses as follows:

1. Participants will report at baseline that their well-being is adversely affected by their skin condition, in line with previous research.
2. Individual participants will report reliable and clinically significant improvements in mood, dermatology-related life quality and self concept using standardised measures, following the self affirmation intervention. Improvement will be maintained at follow-up.
3. At a group level, participants will report significant improvements in mood, dermatology-related life quality and self concept using standardised measures, following the self-affirmation intervention. Improvement will be maintained at follow-up.
4. At an individual level, and where appropriate at group level, there will be a significant difference between pre-intervention and post-intervention idiographic daily repeated measures ratings. The pattern of change will indicate reduction in skin-related distress as a result of the self-affirmation intervention.
5. Participants will identify in the exit interview that self-affirmation:
  - 5.1. increased their ability to deal with skin-related threats, and/or
  - 5.2. increased their values awareness and values-based living.

## **Methods**

The protocol received full approval from the South Yorkshire Research Ethics Committee and from the University of Sheffield Ethics Committee (Appendix B).

### **Experimental design**

A multiple case studies design was used to enable detailed analysis of the intervention with people with different kinds of skin conditions, using idiosyncratic measures relevant to each individual. A simple AB design was used, as the self-affirmation intervention cannot be assumed removable (McQueen & Klein, 2006). Although the AB design is limited by the inability to categorically attribute change to the intervention, a multiple case studies approach mitigates against this limitation (Yin, 2003).

Thirteen participants were recruited, which is a large *N* within case study methodology (Eisenhardt, 1989) and enables a sufficiently powered repeated measures one-sample test of difference (assuming a large effect size; Cohen 1962). A hybrid design was therefore developed, enabling the consideration of the topic in depth and in the context of each individual, as well as at the group (and hence population) level.

### **Participants**

Thirteen participants who self-identified as having skin-related distress were recruited using purposive sampling. All gave informed consent. Eleven completed the study (see Figure 1 and Table 1). Seven (64%) were female. Mean age was 15 years and three months ( $\pm 3$  months; range= 11-21). The recruitment methods gave unevenly distributed ages (Figure 1): seven participants were aged 11-15 and four were aged 19-20. Participants had a range of skin conditions, however eczema was over-represented

in the sample. All participants were UK-born and in full time education. Ten participants (91%) were White, one participant was dual heritage (Asian and White).

**Table 1: Participant demographic, dermatological and recruitment information.**

Participant	Gender	Age	Ethnicity	Recruitment	Skin condition
P1	F	11	White	1	Haemangioma
P2	F	12	White	2	Keloid scar, eczema
P3	F	15	White	1	Acne
P4	F	15	White	2	Acne
P5	M	14	White	1	Eczema
P6	M	15	White	1	Eczema
P7	M	15	Dual	2	Eczema, acne
P8	F	19	White	3	Eczema, acne, phymatous rosacea and impetigo
P9	F	20	White	3	Eczema
P10	F	20	White	3	Eczema
P11	M	19	White	3	Psoriasis, Keloid scar

### **Recruitment**

Three recruitment strategies were used, as shown in Figure 1.

It should be noted that whilst many thousands potentially received recruitment emails, many people filter out such emails. The number of eligible people who had children with skin conditions or who fit the criteria themselves, *and* actually received the emails, is unknown.

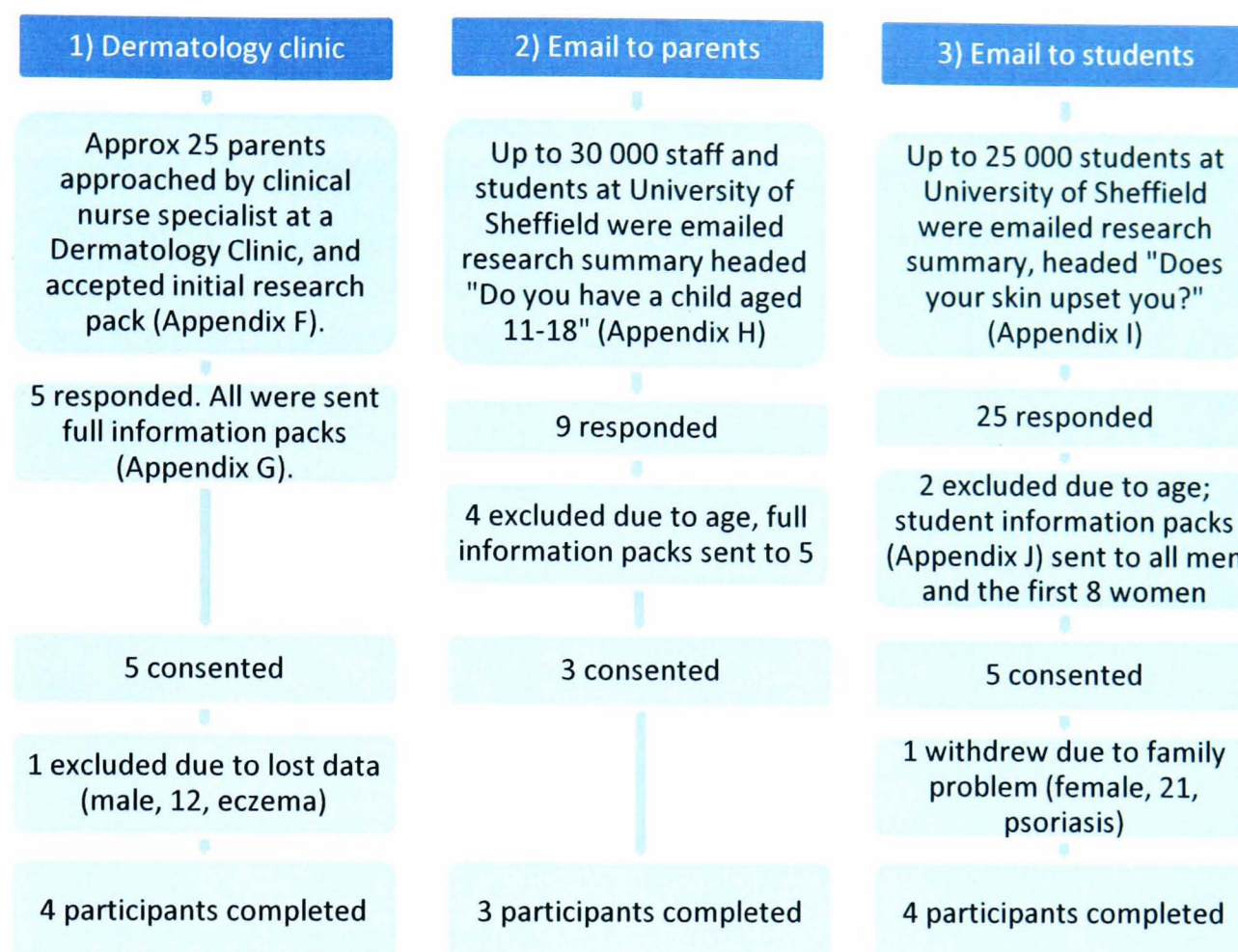


Figure 1: the three recruitment strategies used in this research.

### Inclusion and exclusion criteria

Inclusion criteria were broad. This follows the multiple case study logic of replication (Yin, 2003) wherein each participant constitutes a separate study (and hence a replication of the other participants/studies). According to this logic, the current research comprises eleven  $N=1$  studies, rather than one  $N=11$  study. As case studies generalise to theory rather than to populations, heterogeneity of sample is advantageous. Inclusion criteria were:

- Aged 11-21.
- Any visible dermatological condition perceived by participant to be difficult to conceal (e.g. affecting face or limbs rather than stomach).

- Self-identified as having psychological or social difficulties, specifically agreeing that they feel “upset”, “shy or awkward around other people” and/or “sad, cross or nervous” due to dermatological condition. No minimum distress criteria were used.
- Parental/guardian consent if under 16.
- In full-time education.

Exclusion criteria were for practical reasons due to task demands and financial constraints:

- Any physical or cognitive impairment likely to restrict writing.
- Restricted use of English.

### **Procedure**

The five components of the research procedure are shown in Figure 2.

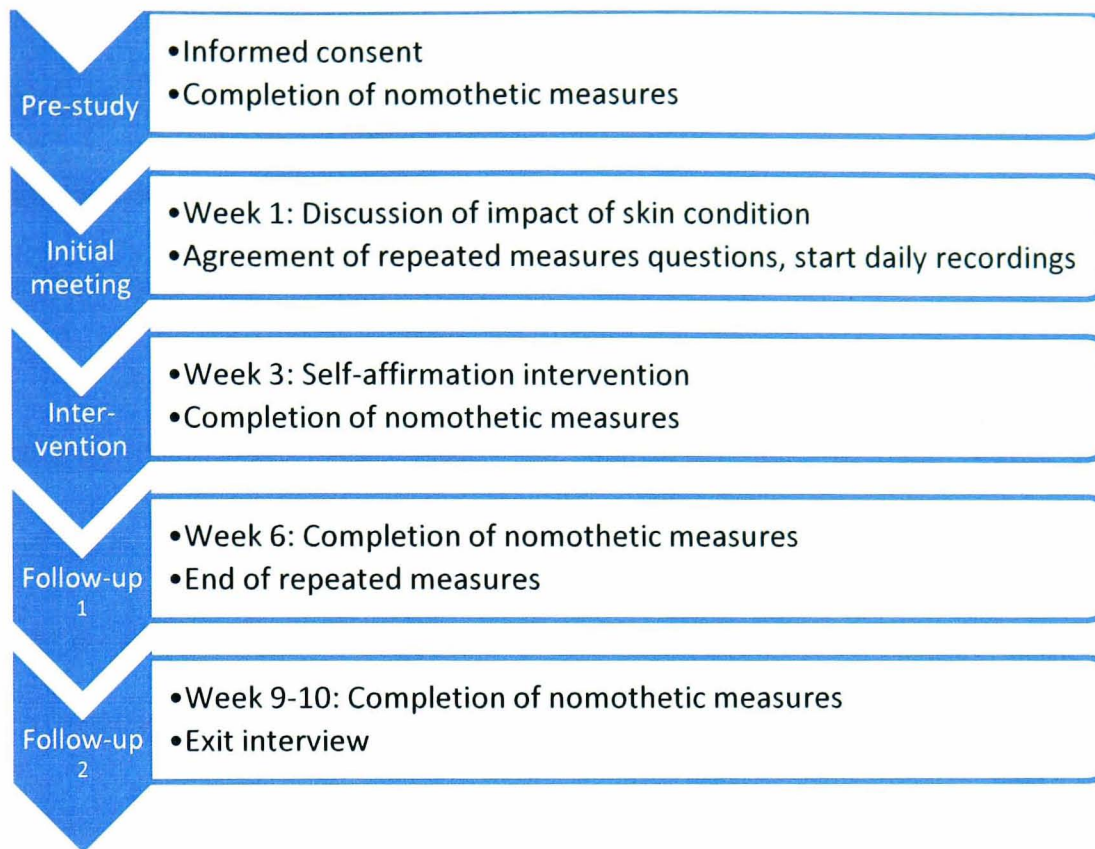


Figure 2: Research procedure for each participant

The initial meeting and intervention were undertaken in person for all participants; follow-ups were either done in person or by telephone (mean number of appointments=3.25). Appointments were conducted at the University of Sheffield or the participant's home, according to participant preference. Each participant was involved for 9-10 weeks (mean=9.5).

In the initial meeting, the researcher and participant collaboratively generated three statements for the participant to rate daily (see measures section). The three statements were elicited by asking "how does your skin condition most affect you?" A prompt list of sample statements was used when necessary (Appendix K).

### ***Measures and materials***

The following nomothetic measures were completed *prior to* the initial appointment, immediately *following* the intervention, and at the start of follow-ups (see Appendix C for all measures).

The Beck Youth Inventory Scales for Depression and Anxiety (BYI-D and BYI-A; Beck, Beck, Jolly & Steer, 2005) were used for participants aged 11-17. The Beck Depression Inventory-II (BDI-II; Beck, Steer & Brown, 1996) and Beck Anxiety Inventory (BAI; Beck & Steer, 1993) were used for participants aged 18+. The Beck scales comprise 20 questions (BYI) and 21 questions (BDI-II and the BAI) about cognitive, emotional and physiological indicators of depression and anxiety, to rate on a four point scale. Younger participants additionally completed the Beck Self-Concept Inventory for Youth (BYI-SC), which comprises 20 items pertaining to competence and self worth. No corresponding test was identified for the older participants.

Results were converted into “T-scores”, which were obtained from the manual for the BYI, and were calculated from large scale psychometric studies using undergraduate students for the BDI-II and BAI (BDI-II: Dozois, Dobson & Ahnberg, 1998; BAI: Borden, Peterson & Jackson , 1991). All of the Beck measures have high internal consistency and reasonable stability over time as indicated alphas and test-retest reliability coefficients respectively (taken from test manuals).

The Dermatological Life Quality Index (DLQI; Finlay & Khan, 1994) and the Children's Dermatological Life Quality Index (CDLQI; Lewis-Jones and Finlay, 1995) were used to determine the impact of the dermatological condition upon quality of life. They



comprise ten questions rated on a four point scale, e.g. “Over the last week, how embarrassed or self conscious have you been because of your skin?” The DLQI has reasonable internal consistency and reasonable stability over time (Basra, Fenech, Gatt, Salek & Finlay, 2008).

#### *Individual daily repeated measures*

Participants were given booklets in which to rate three simple statements daily, using ten point Likert scales. Participants were instructed to answer for each day without checking previous days. The three statements probed ways in which the participant's mood, thoughts or behaviours were affected by their skin, using concrete concepts and the participant's own words. Sample statements include “I felt like my skin held me back from sports” and “I've tried to hide my scar today” (see Appendix D for all statements). Participants typically rated severity and/or frequency (e.g. “not at all” to “constantly”). One statement had a positive focus and would hence be expected to change in the opposite direction from the others.

Participants or their parents/guardians were also asked to keep a record of skin-related events, such as medical appointments or flare-ups.

#### **Intervention**

The intervention used a standard values-based self-affirmation technique, (e.g., Cohen et al., 2006; Harris & Napper, 2005). Participants were given a list of twelve “values” derived from Cohen et al. (2006), such as “having good relationships with friends or family”, or “being independent” (see Appendix L). Participants were asked to think about each value and circle their most important value. Participants were informed that they could add their most important value to the list or circle up to three values if

required. “Values” is an abstract concept: the list was provided to make the concept concrete and to help participants to think about which values were important to them.

Participants were asked to write about their most important value, giving specific examples about why it was important and how it affected the way they live. Details are given in Appendix L. There was no time limit. Participants were allowed to ask questions before starting, and the researcher remained in the room with participants, involved in a separate task. The researcher briefly reviewed the writing when the participant had finished. The three youngest participants struggled to give examples about how their value had affected the way they lived, so they were given additional prompts (e.g. “what have you done because of that value?”). Participants were then asked to briefly rate how important the value was to them.

An exit interview was conducted at the second follow-up (Appendix M). Participants were asked about their experience of participation in the study, the face validity of the self-affirmation task, and whether/how they thought participation had affected them. Finally, they were asked about any significant events (such as a significant flare up in skin condition) that might have affected them during the study. The interview was recorded by contemporaneous note-taking by the researcher.

## **Analyses**

### *Baseline effects of dermatological condition*

Participants reported how they were affected by their skin condition in the initial appointment (p.56). Notes taken from this discussion were subject to template analysis, a thematic method of analysing qualitative data (King, 1998). An initial “template”, comprising hierarchically arranged themes, is derived from the literature

and applied to the data. The initial template was informed by Thompson, Kent and Smith (2002) and Leary et al. (1998). The template is then applied to the whole dataset and modified as appropriate. The initial and final templates are given in Appendix N.

#### *Clinical change within individuals*

Change within individuals was analysed for reliability and clinical significance. The reliable change index was used (RCI; Jacobson & Truax, 1991). The RCI takes into account variance within the population and variance over time within a test, and gives the magnitude of change in score required for a 95% probability that change is not due to chance. Test-retest reliabilities and standard deviations were derived from populations comparable to the participants, using the following sources: BYI: manual (Beck et al., 2005); BDI-II: Sprinkle et al., (2002); BAI: Creamer, Foran & Bell (1995); DLQI: Basra et al. (2008). Participants for whom the change in scores relative to baseline was greater than the RCI were considered to have shown reliable change.

For all of the measures, there was substantial overlap between clinical and nonclinical samples described in the manuals. The appropriate criterion for clinically significant change (CSC) cut-offs were therefore "criterion C": the point at which the score is statistically more likely to have come from a nonclinical population than a clinical population (Jacobson & Truax 1984). CSC values were calculated from means and standard deviations of clinical and appropriate non-clinical samples using the following sources: BYI: manual (Beck et al., 2005); BAI: Jolly, Aruffo, Wherry and Livingston (1993), Borden et al., (1991); BDI-II: manual (Beck et al. 1996). The guidelines suggested by Hongbo, Thomas, Harrison, Salek and Finlay (2005) were used to interpret CSC in the DLQI, as clinical and nonclinical means have not been established.

### *Group analyses*

Changes in nomothetic measures of anxiety, depression, skin-related life quality and self concept were analysed at the group level, using 1 group x 4 time points repeated measures Analysis of Variance (ANOVA). Follow-up deviation analyses were carried out on significant results, to investigate pattern of change and stability of time. Deviation analyses compare each time point with the mean of the other three time points, to determine which time points (if any) significantly deviate from the others.

### *Repeated measures time series analyses*

Repeated measures data was analysed graphically for each individual to enable visual inspection over time. Serial dependency within the data (that is, the extent to which data points depend upon preceding and following data points) was tested using partial autocorrelations on the baseline. The baseline (pre-intervention) and post-intervention daily ratings were analysed for difference using the Mann Whitney U test. Although the measures were repeated, “repeated measures” analyses such as Wilcoxon were not appropriate because there was no theoretical reason to suppose that day 1 of baseline corresponded to day 1 of post-intervention, etc. Results for individual participants are shown in Appendix O.

The three daily statements x 11 participants repeated measures datasets were collated into eight basic themes: restriction, concealment, frustration/upset, confidence, Fear of Negative Evaluations (FNE), preoccupation, checking and acceptance. Appendix D presents the original 33 statements and how they were clustered. Clusters had an *N* of 2-7. Mean daily ratings were calculated for each theme, and presented graphically. The linear regression lines for each participant were superimposed onto the graphs, to

display both the group trends and the individual differences. The baseline and post-intervention ratings were analysed for difference using the Mann Whitney U test.

#### *Exit interview*

The qualitative data acquired from the exit interviews was analysed using Template Analysis. The initial template was informed by self-affirmation theory and the values literature described above, and was adapted according to the data (Appendix P).

## **Results**

### **Qualitative analysis of presenting problems.**

*“It limits what I do, because I don't want others to see it”.*

Participants described at baseline how they were affected by their skin condition.

Themes that correspond to the repeated daily measures are highlighted in bold, direct quotes are given in italics.

Six participants identified **restrictions** on their lives, such as feeling unable to do particular sports, because of attempts to avoid their skin condition being seen.

Participant 11 has a Keloid scar: he said he has *“got used to not using my left arm”*.

Four participants said that their skin condition prevents them from leaving the house at times: *“I make up excuses [...] I just don't feel like going”* (P3). Ten participants

identified **concealment** behaviours. These included the use of concealing clothes, hair or make-up (nine participants), and careful strategies when changing at school (three participants): *“I put loads of make up on...can't leave the house without it”* (P4). Three

participants acknowledged that their strategies aggravated their skin condition: *“my fringe makes [the acne] worse, but I don't want people to see”* (P7).

Six participants talked about their **distress** “[when the eczema flares up] I...start crying, want to just stay in bed ‘til it goes away” (P9). For three participants distress was linked to a lack of control over their condition “the worst part was when I understood that it would get worse and there was nothing I could do” (P11). For others, it was related to the physical discomfort “it's itchy...painful...I scratch it until it bleeds” (P7). Nine participants said that their skin condition affected their **confidence**.

Ten participants acknowledged a **fear of negative evaluations** from others. “it looks horrible...contagious... I'm worried about what people would say or think about it” (P8).

Four participants mentioned being **preoccupied** with their skin: “70-80% of the day” (P4). Five participants said that they **checked** their skin condition frequently. “every time I pass a mirror or a reflection, Then I have to [...] put more foundation on” (P4).

Checking helped Participant 3 predict how others would evaluate her “I always have to check...if I don't know [how my skin looks] then I don't know what to expect”. Four participants gave examples of “a social stigma, a lack of knowledge” (P11) about their condition: “People call me names. [...] when they see it they look away and make funny faces” (P2). Two participants said that even people who tried to be supportive did not understand: “My boyfriend says “just don't scratch it!” [...] it feels really patronising” (P10). Two participants highlighted a lack of understanding and “Not much sympathy” (P10) from their doctor, who based treatment eligibility on seemingly irrelevant criteria with “no understanding of how it affects me” (P11).

Seven participants mentioned people who *did* understand, and situations in which they could **accept** their skin conditions. This generally included immediate family and selected friends: “my closest friends have seen it, but the mean girls haven't” (P1).

Participant 4 said she feels *“Confident on stage, even without make up on [...] cos I will never see the audience again”*. Two participants said that it was easier with someone who also has skin problems *“a common bond in an otherwise judgemental society”* (P11). Participant 11 even mentioned a positive side to his skin condition *“it's made me less brash, less laddish”*.

Participants hence reported a significant and predominantly negative impact of their skin condition, in line with previous qualitative research. They experienced associated psychosocial threats, and identified a range of limiting behaviours aimed at ameliorating this threat.

### **Clinical change and group analyses**

#### *Depression*

Figure 3 and Table 2 present depression levels as rated by Beck Depression inventories. At the individual level, seven participants had a reliable reduction in depression post-intervention, relative to pre-study, baseline levels. This reduction was also clinically significant for participants above the clinical cut-off at baseline. Reliable improvement was maintained at second follow-up for five participants. The intervention had no effect on depression for two participants, and two participants reported clinically significant deterioration at follow-up.

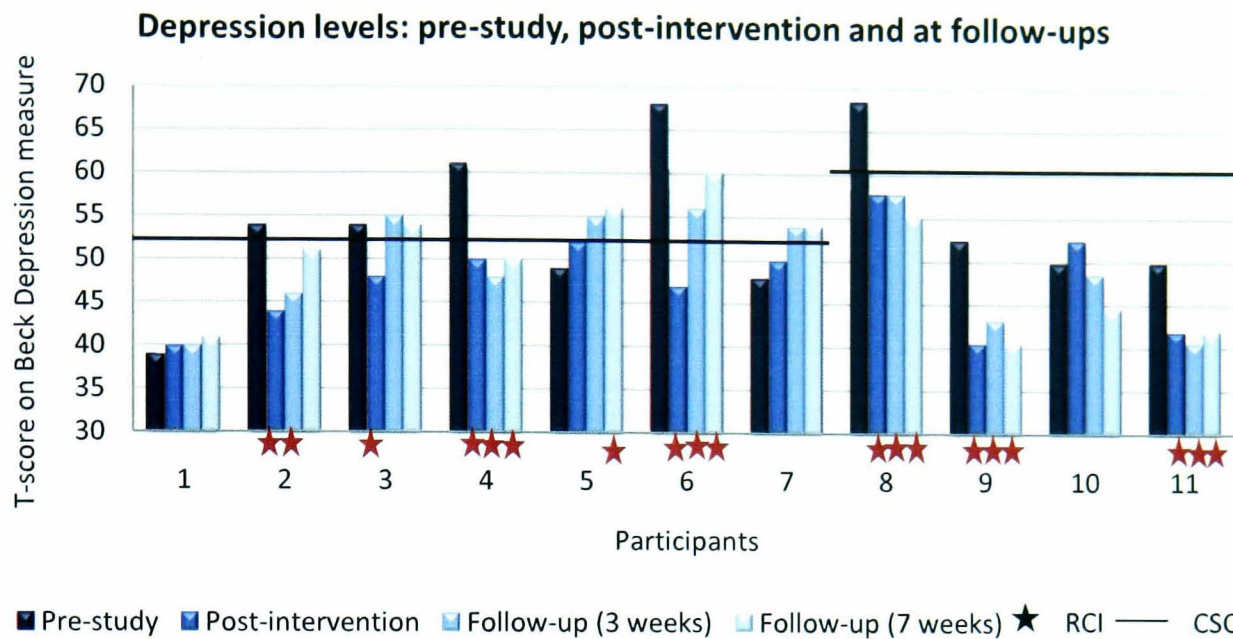


Figure 3: Depression pre-study, post-intervention and at follow-ups. As measured by the BYI Depression subscale (participants 1-7) and the BDI-II (participants 8-11). CSC = clinically significant change: above the CSC line the individual is statistically more likely to belong to a clinical than a non-clinical population. RCI indicates scores which meet the reliable change index criterion, relative to baseline.

Individual level	Pre v. post	Pre v. F1	Pre v. F2	Total
RCSC improvement (max 5)	5	3	2	10
RC improvement	2	3	3	8
CSC improvement			1	1
No change	4	3	3	10
CSC deterioration	0	2	1	3
RCSC deterioration			1	1
Group level	Pre-study	Post	F1	F2
Mean	53.06	47.62	49.47	49.84
Standard deviation	8.79	5.57	6.44	6.78

Table 2: Change in depression following the intervention; all individual-level scores are compared with baseline. RC and CSC as defined in Figure 3; the maximum for RCSC improvement denotes *N* above the threshold at baseline. Pre=pre-study, post=post-intervention, F1=follow-up 1, F2=follow-up 2; RC=reliable change, RCSC=reliable and clinically significant change.

Changes in depression were analysed at the group level, using repeated measures ANOVA with the within-subjects factor being stage of participation and the dependent variable being the T-score on the appropriate Beck Depression measure. The data did not meet the sphericity condition (Mauchly's test was significant  $p < 0.05$ ), so the Huynh-Feldt correction was applied. ANOVA indicated a significant effect of stage:  $F(2.27, 22.17) = 4.41, p < 0.05$ . Follow-up deviation contrasts indicated that pre-study scores were significantly higher than the other three, and post-intervention scores



were significantly lower than the other three ( $p < 0.05$  for both). Participation hence resulted in a significant improvement from baseline that was maintained (albeit at a lower level) at follow-up.

### Anxiety

Figure 4 and Table 3 present anxiety levels as measured by Beck Anxiety inventories. At the individual level, four participants had a reliable reduction in anxiety immediately post-intervention, relative to baseline levels. This reduction was clinically significant for two of the three participants who were above the clinical cut-off at baseline. At second follow-up, five participants reported reliable improvement. The intervention had no effect on anxiety for two participants, and two participants reported clinically significant (one reliable and clinically significant) deterioration at follow-ups.

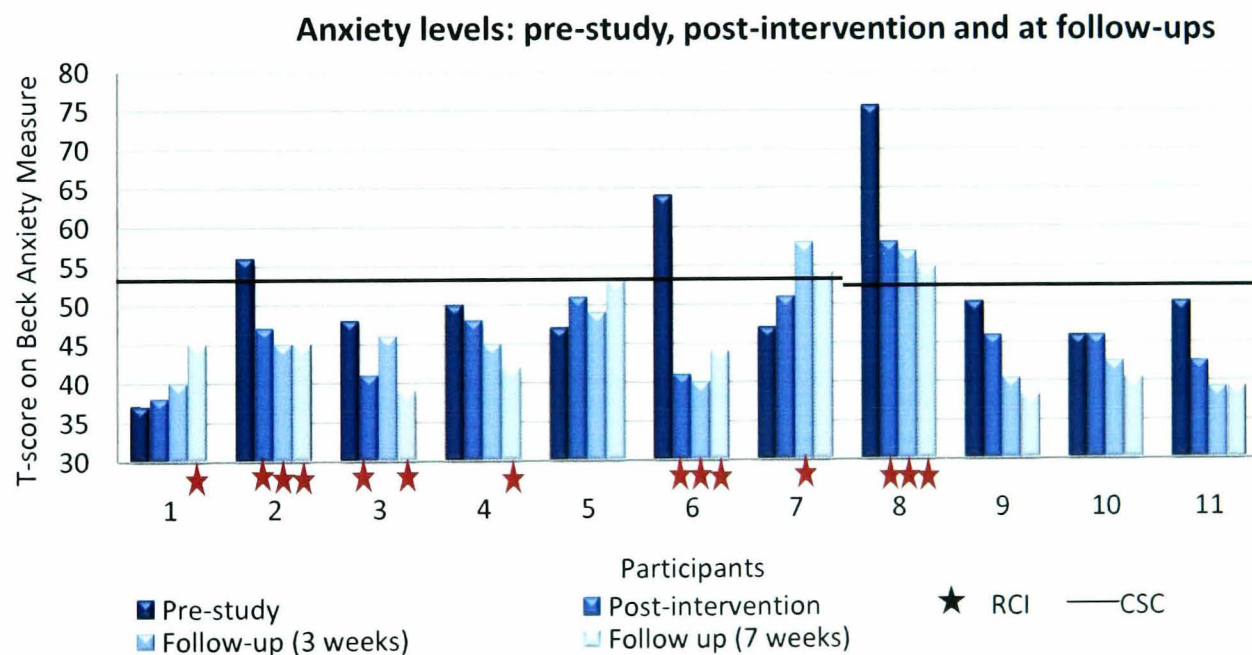


Figure 4: Anxiety pre-study, post-intervention and at follow-ups. As measured by the Beck Youth Inventory Anxiety subscale (participants 1-7) and the Beck Anxiety Inventory (participants 8-11). CSC and RCI are as defined in Figure 3.

Individual level	Pre v. post	Pre v. F1	Pre v. F2	Total
RCSC improvement (max 3)	2	2	2	6
RC improvement	2	1	3	6
No change	7	7	3	13
CSC deterioration			2	2
RC deterioration			1	1
RCSC deterioration		1		1
Group level	Pre-study	Post	F1	F2
Mean	51.90	46.30	45.65	44.96
Standard deviation	10.25	5.68	6.57	6.20

Table 3 Change in anxiety following the intervention. Abbreviations as for Table 2.

Changes in anxiety scores were analysed at the group level, using repeated measures ANOVA. The data did not meet the sphericity condition (Mauchly's  $p < 0.01$ ), so the Huynh-Feldt correction was applied. The ANOVA indicated a significant effect of stage:  $F(1.63, 16.29) = 4.11, p < 0.05$ . Follow-up deviation contrasts indicated that anxiety levels pre-study were significantly higher than at post-intervention and follow-ups ( $p < 0.05$ ). Participation resulted in a significant improvement from baseline, which was maintained at follow-up.

#### *Dermatology life quality*

Figure 5 and Table 4 present dermatology life quality, as measured by the DLQI and the CDLQI. An increased score indicates *greater* distress associated with the skin condition. At the individual level, four participants had a reliable reduction in DLQI immediately post intervention, relative to baseline levels; for two this was maintained at follow-up. For three of the four participants who were above the clinical cut-off prior to participation, this reduction was also a clinically significant change. Four participants reported a reliable and/or clinically significant increase in DLQI over the duration of the study.

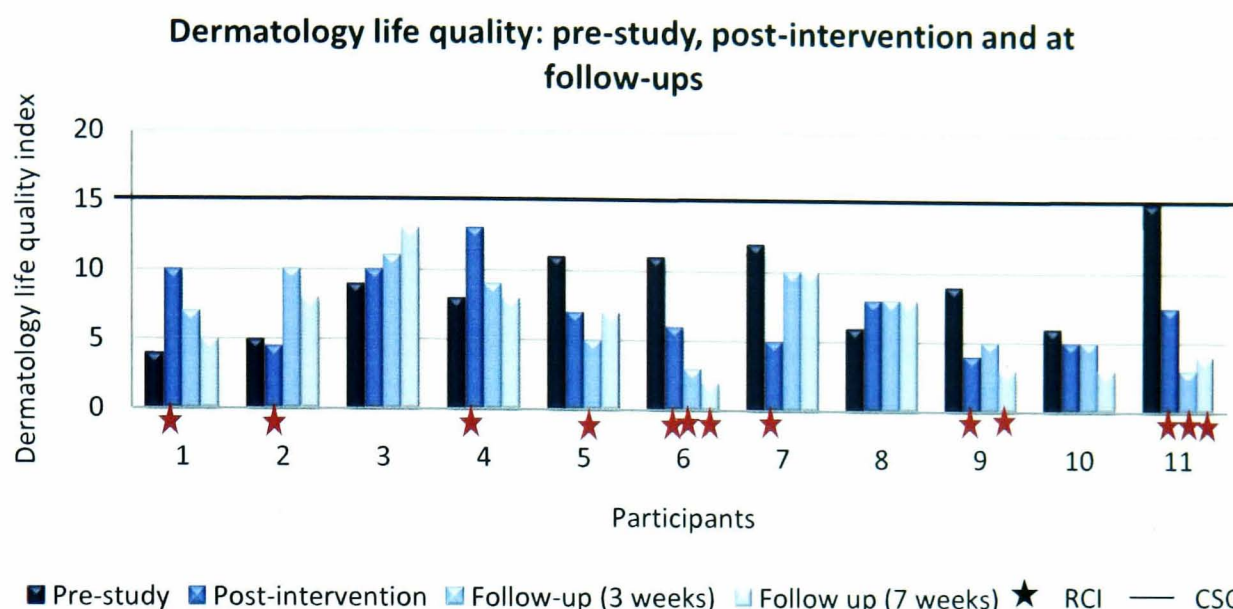


Figure 5: Dermatology-specific quality of life pre-study, post-intervention and at follow-ups. As measured by the CDQLI (participants 1-7) and the DQLI (participants 8-11). CSC and RCI are as defined in Figure 3.

Individual level	Pre v. post	Pre v. F1	Pre v. F2	Total
RCSC improvement (max. 4)	3	3	2	8
RC improvement	1		1	2
CSC improvement	1		2	3
No change	4	6	5	15
CSC deterioration		1	1	2
RC deterioration	1			1
RCSC deterioration	1			1
Group level	Pre-study	Post	F1	F2
Mean	8.73	7.27	6.91	6.45
Standard deviation	3.35	2.81	2.88	3.39

Table 4 Change in Dermatology life quality following the intervention. Abbreviations as for Table 2.

Changes in Dermatology Life Quality were analysed at the group level, using repeated measures ANOVA. The data did not meet the sphericity condition (Mauchly's  $p < 0.05$ ), so the Huynh-Feldt correction was applied. The ANOVA indicated no significant effect of stage:  $F(2.23, 22.64) = 1.29, p = 0.30, N = 11$ , which is slightly underpowered to find even a large effect using this test. The results indicate that participation did not significantly affect DLQI at the group level.



### Self concept

Figure 6 and Table 5 present self-concept ratings for the younger seven participants. All participants were statistically closer to a clinical than a non-clinical group at baseline. At the individual level, one participant had a reliable and clinically significant improvement in self concept post-intervention that was maintained at baseline. Two other participants reported temporary clinically significant but not reliable improvement; the remaining four reported no changes.

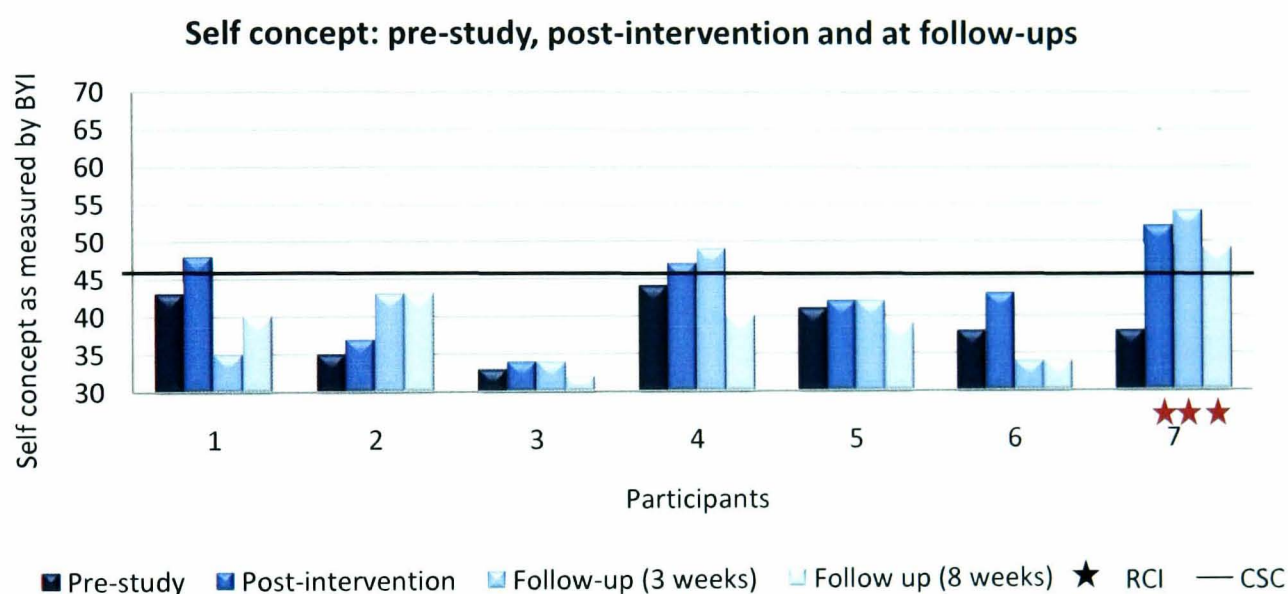


Figure 6: Self concept pre-study, post-intervention and at follow-ups. As measured by the BYI-Self Concept subscale. Below the CSC line the individual is statistically more likely to belong to a clinical than a non-clinical population.

Individual level	Pre v. post	Pre v. F1	Pre v. F2	Total
RCSC improvement (max 7)	1	1	1	3
CSC improvement	2	1		3
No change	4	5	5	14
Group level	Pre-study	Post	F1	F2
Mean	38.36	43.29	41.57	39.57
Standard deviation	4.06	6.32	7.85	5.62

Table 5: Change in self concept following the intervention. Abbreviations as for Table 2.

Changes in self-concept scores were analysed at the group level, using repeated measures ANOVA. The ANOVA indicated no significant effect of stage:  $F(3,18) = 1.59$ ,  $p = 0.27$ . This test was significantly underpowered, at  $N = 7$ . However, the results indicate that participation did not affect self-concept at the group level.

#### **Repeated measures time series analyses**

The daily repeated measures statements were derived from eight broad themes and used the same ratings metric (1-10). The results for 3 statements x 11 participants are presented below, clustered into the eight themes. Partial autocorrelations conducted on the baseline data revealed significant serial dependency in the averaged FNE data: FNE results should be interpreted with caution. Graphs show the group average ratings and linear regression trendlines derived for each participant. It should be noted that trendlines are used to represent each participant irrespective of whether they explain a significant amount of variability in the data. Individual participants' results are presented in Appendix M.

## Restriction

Figure 7 shows the two participants who rated how restricted they felt by their skin.

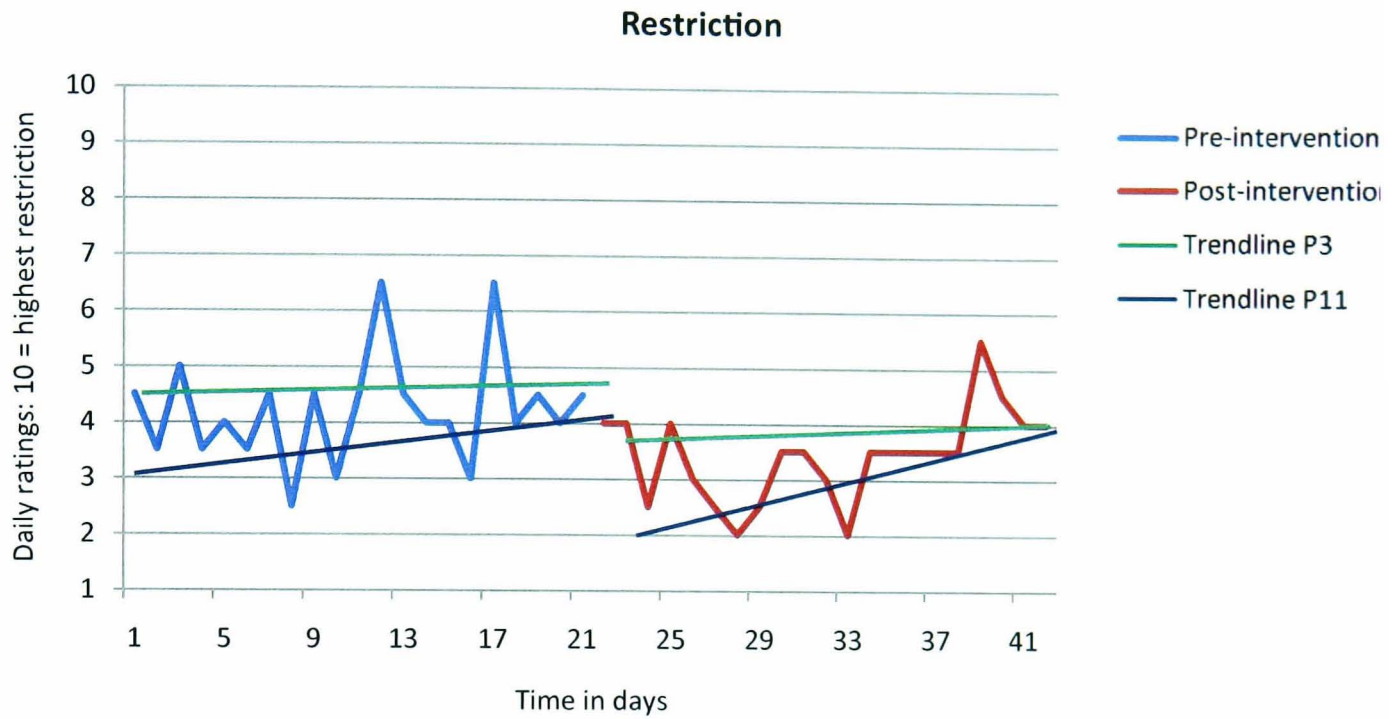


Figure 7: Restriction plotted against time: pre-intervention versus post-intervention ( $N=2$ ). For all following graphs, the group average ratings are shown behind the linear regression trendlines for each participant's ratings pre- and post-intervention. The mean average and standard deviations are shown below.

P3 reported a significant decrease in restriction

following the intervention (Mann Whitney  $U=$

Restriction	Mean	St. dev.
Pre-intervention	4.21	0.98
Post-intervention	3.42	0.84

137.0,  $p<0.05$ ); P11 reported a trend decrease (Mann Whitney  $U=$  155.0,  $p=0.088$ ).

When analysed together, reported restriction was significantly reduced following the intervention (Mann Whitney  $U=$  113.0,  $p<0.01$ ).

### Concealment

Figure 8 shows the six participants who rated how much they concealed their skin condition.

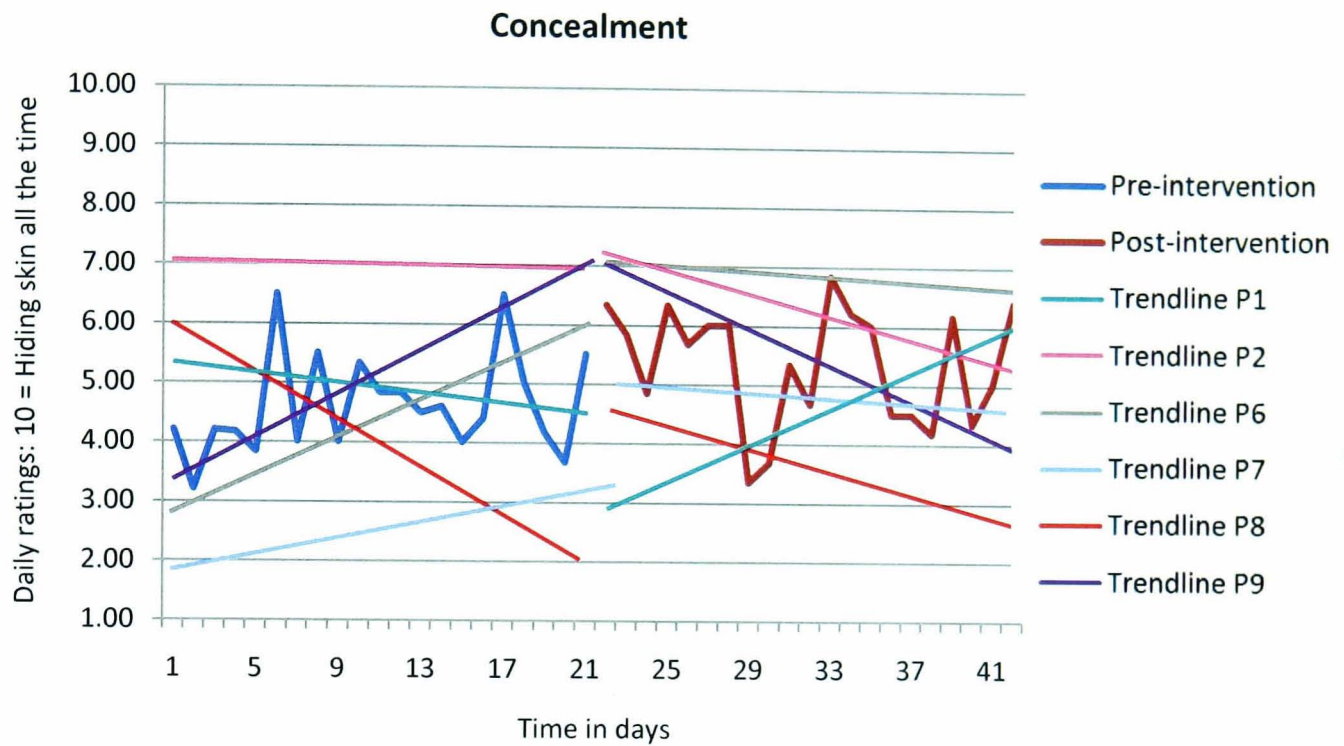


Figure 8: Concealing behaviour plotted against time: pre-intervention versus post-intervention (N=6). Further information is given in Figure 7.

The male participants (6 and 7) reported significantly greater levels of hiding behaviour following the intervention (Mann Whitney U=88.5 and 66.5,  $p < 0.001$  for each). Female participants reported no significant change following the intervention. Overall, avoiding and concealment behaviours increased significantly following the intervention (Mann-Whitney U=128.5,  $p < 0.05$ ).

Concealment	Mean	St. dev.
Pre-intervention	4.62	0.86
Post-intervention	5.34	1.00



### Frustration and upset

Figure 9 shows the three participants who rated their levels of frustration and upset about their skin.

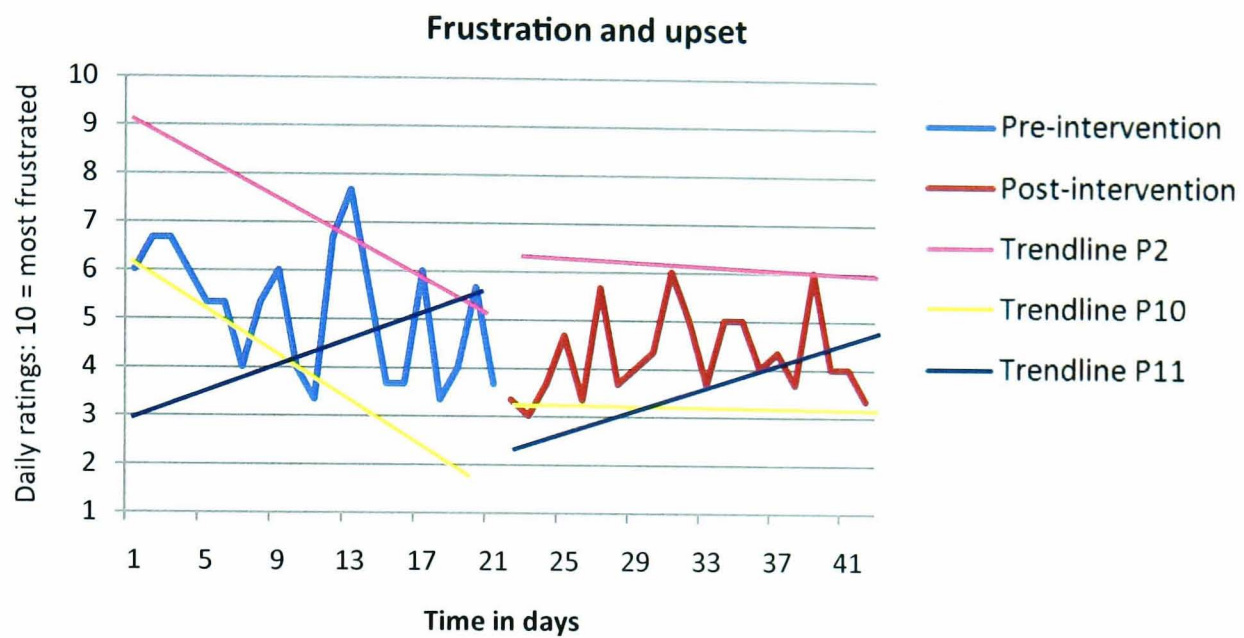


Figure 9: Frustration and upset plotted against time: pre-intervention versus post-intervention ( $N=3$ ). Further information is given in Figure 7.

None of the participants reported a significant change in distress following the intervention. Mean ratings were non-significantly lower post-intervention for each participant, and the female participants (2 and 10)

reported a reduction within the baseline which stabilised post-intervention. When analysed as a

Frustration	Mean	St. dev.
Pre-intervention	5.18	1.30
Post-intervention	4.27	0.89

cluster, reported distress and frustration significantly reduced following the intervention (Mann Whitney  $U= 133.0$ ,  $p<0.05$ ).



## Confidence

Figure 10 shows the seven participants who rated their daily confidence levels.

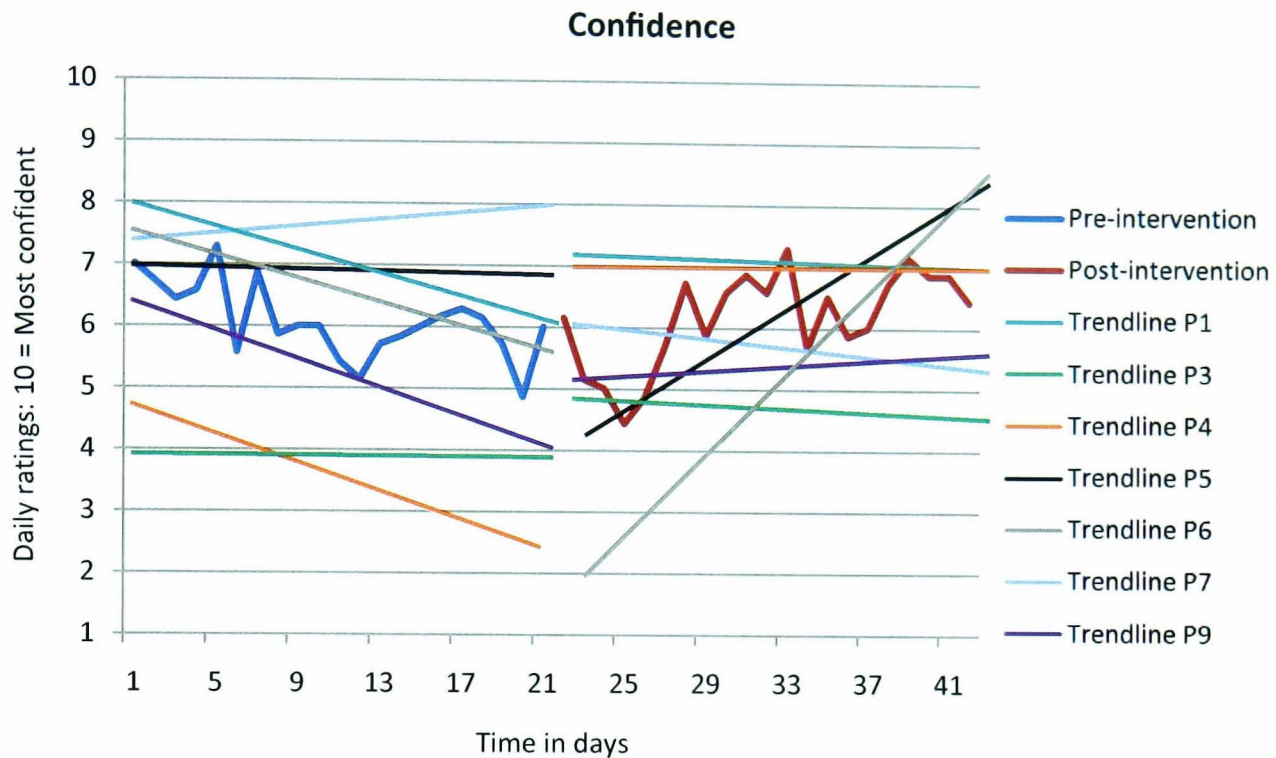


Figure 10: Confidence plotted against time: pre-intervention versus post-intervention ( $N=7$ ). Further information is given in Figure 7

P3 and P4 (both: female, 15, acne) reported a significant increase in confidence post-intervention (Mann Whitney  $U= 8.5$ ,  $p<0.001$  and Mann Whitney  $U= 146.0$ ,  $p<0.05$ ). P7 (male, 14, eczema) reported a significant decrease in confidence post-intervention (Mann Whitney  $U= 82.5$ ,  $p<0.001$ ). The remaining four reported no significant change, although P6 demonstrates large variability over both time periods. When analysed as a cluster, reported confidence was not significantly different post-intervention (Mann Whitney  $U= 196.0$ ,  $p=0.54$ ).

Confidence	Mean	St. dev.
Pre-intervention	6.07	0.60
Post-intervention	6.15	0.79

## Fear of Negative Evaluations (FNE)

Figure 11 shows the three participants who rated FNE.

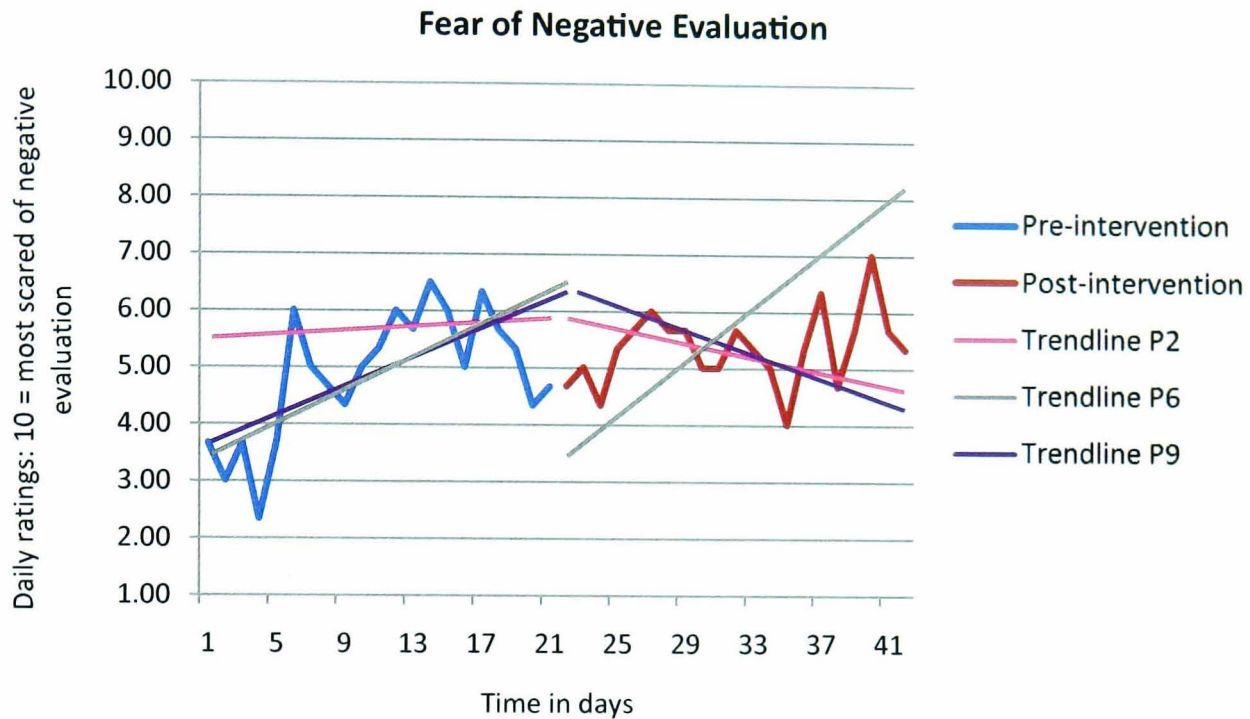


Figure 11: FNE plotted against time: pre-intervention versus post-intervention ( $N=3$ ). Further information is given in Figure 7.

P6 (male, 14) had substantial variability in his reported levels of FNE both pre and post intervention, which corresponded with flare-ups in his eczema. He reported significantly higher levels of FNE post-intervention (Mann Whitney  $U= 120.5$ ,  $p<0.05$ ). The other participants reported no significant change following the intervention, although Figure 11 shows non-significant trends towards reduction. When analysed as a cluster, reported FNE was not significantly different following the intervention (Mann Whitney  $U= 172.0$ ,  $p=0.22$ ).

FNE	Mean	St. dev.
Pre-intervention	4.87	1.12
Post-intervention	5.33	0.93

### Preoccupation

Figure 12 shows the five participants who rated their preoccupation with their skin condition.

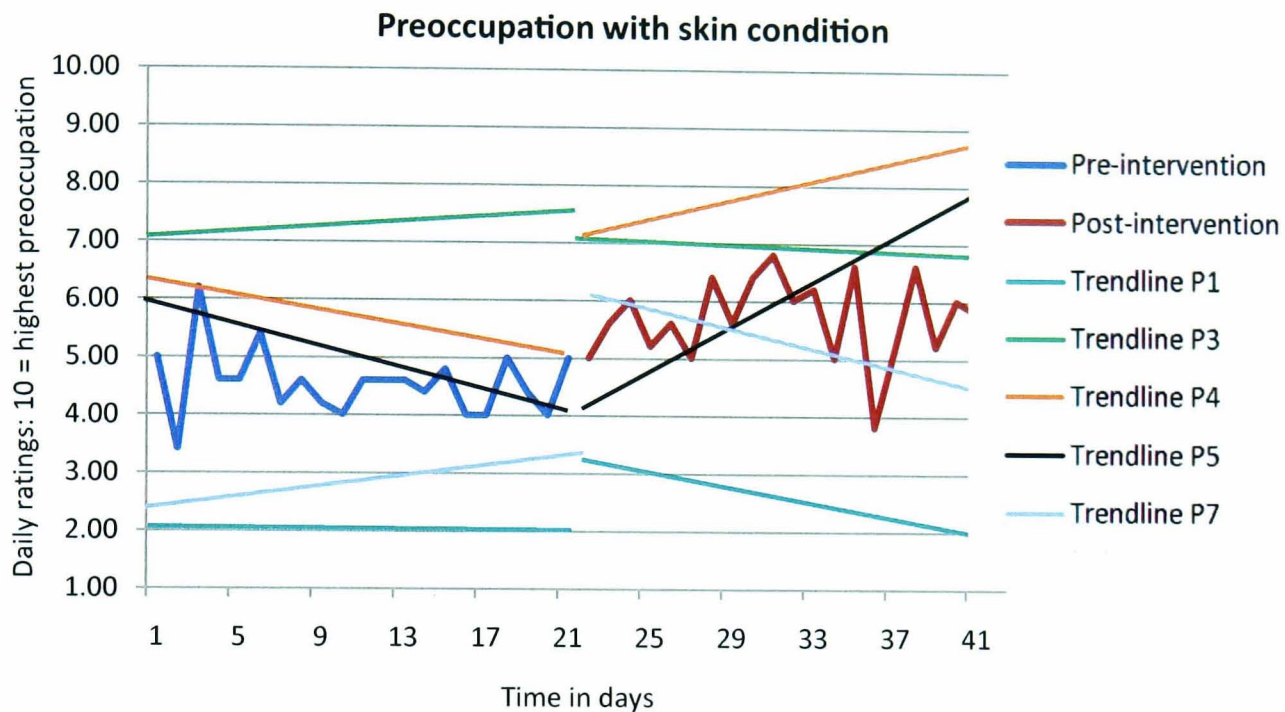


Figure 12: Preoccupation plotted against time: pre-intervention versus post-intervention (N=5). Further information is given in Figure 7.

P4 and P7 had a significant increase in preoccupation (Mann Whitney U= 114.0,  $p < 0.01$  and Mann Whitney U= 60.5,  $p < 0.001$  respectively). The others reported no significant change, although Figure 12 indicates that all but P3 reported some increase. When analysed as a cluster, reported preoccupation

increased significantly following the intervention (Mann Whitney U= 44.0,  $p < 0.001$ ).

Preoccupation	Mean	St. dev.
Pre-intervention	4.55	0.59
Post-intervention	5.75	0.75



## Checking

Figure 13 shows the four participants who rated the amount that they checked their skin condition.

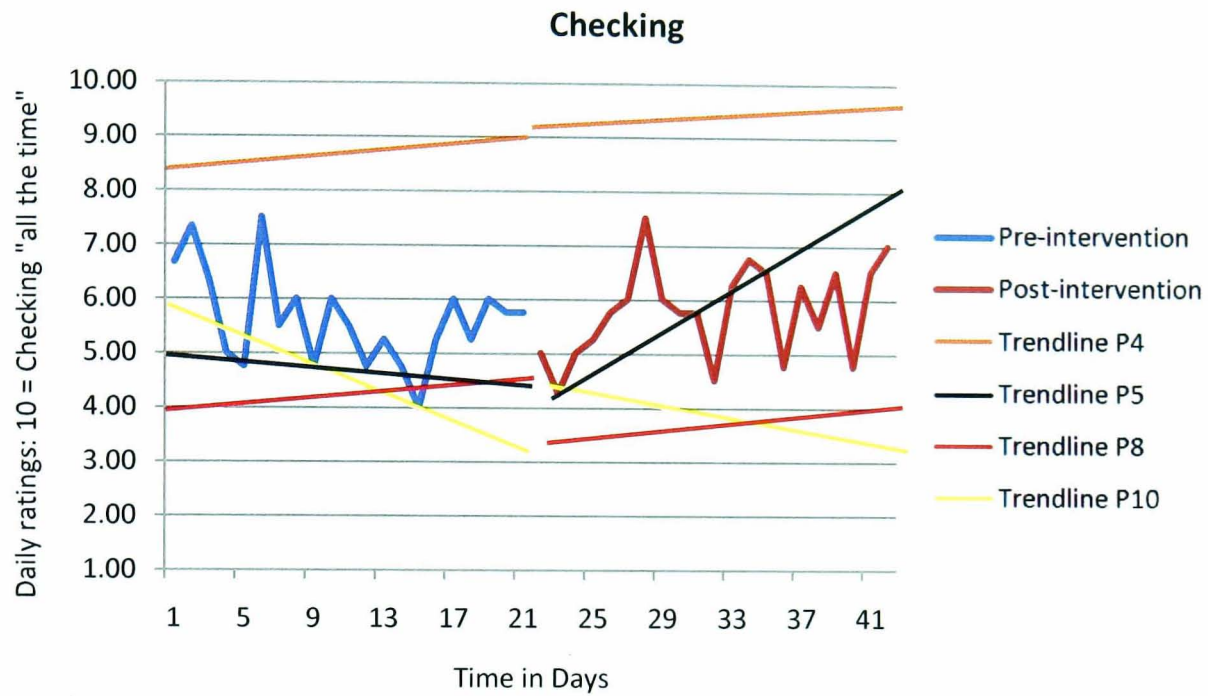


Figure 13: Checking behaviours plotted against time: pre-intervention versus post-intervention ( $N=4$ ). Further information is given in Figure 7.

P5 appears to show an increase in checking post-intervention, but change was not significant for any of the participants. When analysed as a cluster, reported checking was not affected by the intervention (Mann Whitney  $U= 192.0, p=0.47$ ).

Checking	Mean	St. dev.
Pre-intervention	5.62	0.87
Post-intervention	5.79	0.87

## Acceptance

Figure 14 shows the three participants who rated their levels of acceptance about their skin (e.g. “I felt OK about my skin today”).

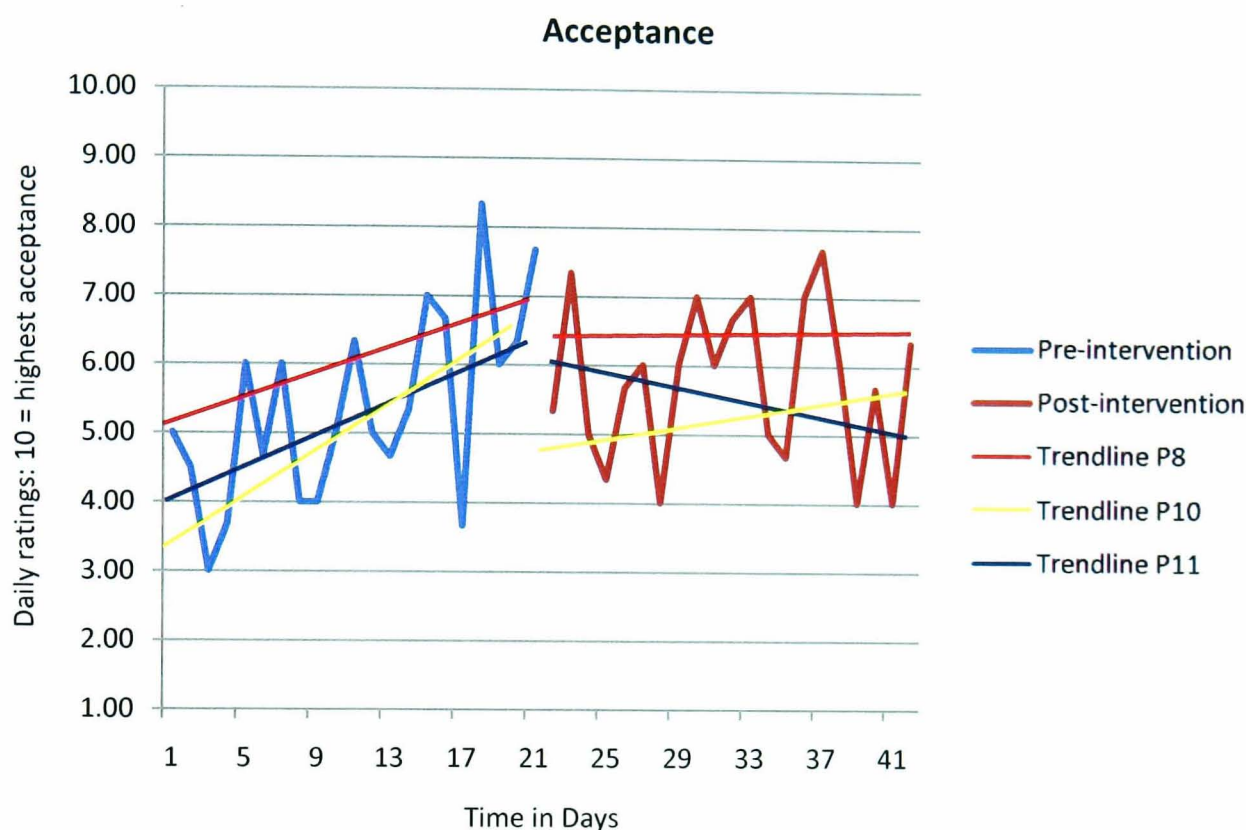


Figure 14: Acceptance plotted against time: pre-intervention versus post-intervention (N=3). Further information is given in Figure 7

None of the participants reported significant change in their daily level of acceptance.

Figure 14 indicates that levels of acceptance increased following session 1 and stabilised following the intervention. When analysed as a cluster, reported acceptance

was not significantly different following the intervention (Mann Whitney U= 181.0,  $p=0.32$ ).

Acceptance	Mean	St. dev.
Pre-intervention	5.37	1.39
Post-intervention	5.74	1.13

## Results summary

The results are summarised for individual participants and by group in Table 6.

Demographic information is given as context for the results.

Participant	1	2	3	4	5	6	7	8	9	10	11	Group analysis	
gender	f	f	f	f	m	m	m	f	f	f	m		
age	11	12	15	15	12	14	14	19	20	20	19		
condition	haem	Keloid ecz	acne	acne	ecz	ecz	ecz acne	ecz acne*	ecz	ecz	keloid psoria		
race	White	White	White	White	White	White	Dual	White	White	White	White		
Values	Relate	Creat	Relate	Creat	Relate	Creat	Relig	Grade	Relate	Relate	Humo		
BDI pre-post	≈	RCSC↑	RCSC↑	RCSC↑	≈	RCSC↑	≈	RCSC↑	RC↑	≈	RC↑		↑
BDI pre-F1	≈	RCSC↑	≈	RCSC↑	CSC↓	RC↑	CSC↓	RCSC↑	RC↑	≈	RC↑		
BDI pre-F2	≈	CSC↑	≈	RCSC↑	CSC↓	RC↑	CSC↓	RCSC↑	RC↑	≈	RC↑		
BAI pre-post	≈	RCSC↑	RC↑	≈	≈	RCSC↑	≈	RC↑	≈	≈	≈	↑	
BAI pre-F1	≈	RCSC↑	≈	≈	≈	RCSC↑	RCSC↓	RC↑	≈	≈	≈		
BAI pre-F2	RC↓	RCSC↑	RC↑	RC↑	CSC↓	RCSC↑	CSC↓	RC↑	≈	≈	≈		
DLQI pre-post	RC↓	≈	≈	RCSC↓	CSC↑	RCSC↑	RCSC↑	≈	RC↑	≈	RCSC↑	≈	
DLQI pre-F1	≈	RC↓	CSC↓	≈	RCSC↑	RCSC↑	CSC↑	≈	≈	≈	RCSC↑		
DLQI pre-F2	≈	≈	CSC↓	≈	CSC↑	RCSC↑	CSC↑	≈	RC↑	≈	RCSC↑		
Self pre-post	CSC↑	≈	≈	CSC↑	≈	≈	RCSC↑					≈	
Self pre-F1	≈	≈	≈	CSC↑	≈	≈	RCSC↑						
Self pre-F2	≈	≈	≈	≈	≈	≈	RCSC↑						
Restriction			↑								≈	↑↑	
Conceal	≈	≈				↓↓↓↓	↓↓↓	≈	≈			↓	
Frustrate		≈								≈	≈	↑	
Confidence	≈		↑	↑↑↑↑	≈	≈	↓↓↓↓		≈			≈	
NE		≈				↓			≈			≈	
Preoccupat ion	≈		≈	↓↓	≈		↓↓↓↓					↓↓ ↓	
Checking				≈	≈			≈		≈		≈	
Accept								≈		≈	≈	≈	

Table 6 Summary of the results. All measures are presented such that ↑ indicates improvement and ↓ indicates deterioration. Abbreviations as follows: f=female, m=male, haem: haemangioma; ecz=eczema; psoria: psoriasis; \*=plus scarring, phymatous rosacea and impetigo. Dual=dual heritage: Asian and White. Relate=relationships with family and friends, Creat=creativity, Relig=religion, grade=academic achievements, humo=humour. FNE=Fear of Negative Evaluations, ↑↑↑↑=p<0.001, ↑↑↑=p<0.005, ↑↑=p<0.01, ↑=p<0.05, ≈=p>0.05, or no reliable or clinically significant change. Shading indicates that participant was below clinical cut off at baseline.

### Qualitative analysis of the impact of the study: Exit interview findings.

*“Is this the life that I want to have?”*

Participants’ descriptions of how the study had affected them were analysed using

Template analysis (Appendix N). The qualitative data is summarised in Table 7.



P.	Pre-study distress	Nomothetic measures	Idiographic measures	Qualitative effects: main self-identified changes	Most useful?
1	low	slight deterioration	no change	More open about skin problem with friends	Talking
2	high	improvement	no change	Increased values based living and more open about skin problems with friends	Self-affirmation, talking
3	high	improvement	improvement	Increased values based living and self awareness	Self-affirmation, nomothetic measures
4	high	improvement	mixed	Self monitoring increased awareness (therefore choice), reduced concealment feeling "heard".	Talking, nomothetic measures
5	low	deterioration	no change	Increased self awareness	Idiographic measures
6	high	improvement	deterioration	Looking after skin more, reduced concealment, feeling "heard"	Talking
7	low	mixed	deterioration	Increased self esteem and self-reflection	nomothetic measures
8	high	improvement	no change	Increased values awareness	Self-affirmation
9	medium	improvement	no change	Increased values-based living, lower FNE	Self-affirmation
10	medium	no change	no change	Feeling validated, more open about skin problems	Self-affirmation, Talking
11	high	improvement	no change	Reduced concealment and avoiding, increased self-acceptance/self-awareness	Talking, idiographic measures

Table 7: Summary of the qualitative results. P=participant. Distress was categorised using nomothetic measures and clinical judgement.

### *Impact of the self-affirmation intervention*

Seven participants identified an increased awareness of non-skin related values after the intervention: *"It made me think about what mattered"* (P8). Two participants said that were constantly aware of their chosen values anyway: *"I think about it so much that putting it down on paper doesn't make much difference"* (P7). Five participants identified specific ways in which they had increased values-based living: *"it encouraged me to do more of what is important to me [...] I go out a lot more now, don't cover*

*myself up or make excuses” (P3); and “I never used to dance in public, I daren’t in case of what people thought but I went to a party...and just started dancing” (P2).*

Five participants identified an increased ability to deal with skin-related threats after the intervention: *“it made me feel like a stronger person, more able to deal with smaller things like my skin upsetting me” (P10).* Three participants identified a reduction in FNE: *“I’ve noticed [other people] don’t just look at your face”(P3).* Two mentioned a change in priorities: *“I realised there’s more important things to worry about than my eczema” (P9).* Participant 3 expressed an appreciation that there was more to her than her skin: *“it’s just part of me, isn’t it?” (P3).*

#### *Increased awareness*

Eight participants identified increased awareness of preoccupation and their avoidance and concealment behaviours: *“If it affects my life this much is it really my life or is it psoriasis’? Is this the life that I want to have?” (P11).* Four participants said the increased awareness enabled them to act differently: *“realising I felt embarrassed made me talk to my friends about it... then I felt less embarrassed” (P1).* Five of the younger participants said that the nomothetic measures had increased their self-awareness, with the questions prompting self-reflection. Four participants identified benefits from self-monitoring: *“if I managed to [show my skin] in the day I could think about it in the evening and give myself some credit for it [...] made me question why I was so unrelaxed, made me come to terms with what I’ve got” (P11).*

#### *Feeling heard*

Nine participants identified benefits from the initial discussion; six identified it as the most important component. Effects included increased awareness: *“I realised how big*



*a deal it is to me*" (P9), and feeling heard: *"it's not just me keeping it inside"* (P4). For Participant 10, *"you think shouldn't be a big deal"*, so it was important to be: *"given permission to vocalise that something upsets you, that someone understands that it's a problem."* Two participants said that talking had made it easier to talk to other people afterwards. Three participants said that doctors *"don't really get it"* (P8) but that they would appreciate the opportunity to explain to their doctors how their condition affects them.

### *Improvements*

Eight participants identified specific improvements in their relationship with their skin condition. Four participants identified a reduction in concealment, and that they had confronted some of the restrictions they had felt: *"I've decided 'c'mon, just wear shorts, back yourself"* (P11); and *"I can go out without make up now and don't need to go and check so much"* (P4). Participant 10 said that having her distress validated made it *"easier to talk to other people about it"*, and that she could now talk more openly to her boyfriend about her skin. Three participants did not change their relationship with their skin condition: *"[I] don't think I've improved the way I feel about it... it's still there"* (P8). However, all identified some psychosocial benefit from the intervention: *"it boosted my self esteem"* (P7).

### **Summary**

**Hypothesis 1 was supported.** Participants identified numerous ways in which their well-being was adversely affected by their skin condition at baseline. Results were consistent with previous research.

**Hypothesis 2 was partially supported.** Most participants who presented with significant pre-study distress reported reliable and clinically significant improvement in anxiety and depression ( $N=7$  of 8); participants who presented with low pre-study distress ( $N=3$ , all aged 11-15) reported some deterioration. Improvements were maintained at follow-up for seven participants.

Only one participant reported reliable and clinically significant improvement in self concept; this was maintained in follow-up. This participant reported deterioration in all other measures; interestingly, he identified improved “self-esteem” in the exit interview.

Change in dermatology-related life quality was mixed. Male participants all had clinically significant skin-related distress pre-study, and all reported reliable and/or clinically significant improvement. Female participants were all below the DLQI clinical cut-off pre-study. Younger female participants all reported reliable and/or clinically significant deterioration in at least one post-intervention assessment. Participant 9 improved; the other two older female participants reported no change. The relative effects of gender and pre-study DLQI severity cannot be separated with this dataset.

**Hypothesis 3 was partially supported.** At the group level, there was significant improvement in anxiety and depression, but not in dermatology-related life quality or self-concept. Deviation analyses indicated that pre-study scores differed significantly from the other three time points for both depression and anxiety, indicating that improvement post-intervention was maintained significantly at follow-ups. Substantial

inter-subject variability in the DLQI explains the lack of significant effect at the group level.

**Hypothesis 4 was not supported for most participants.** Most participants reported no significant differences in the idiographic daily repeated measures in the period post-intervention relative to pre-intervention. The exceptions were two 14-year-old boys with eczema, who reported deterioration, and two 15-year-old girls with acne, who generally reported improvement. Confidence increased for two participants and decreased for one participant; reported concealment and preoccupation increased for two participants. At the group level, restriction and frustration reduced in reported severity, whilst concealment and preoccupation increased in reported severity. Checking behaviours, FNE and acceptance were not significantly affected.

**Hypothesis 5 was partially supported for most participants.** Overall, eight participants identified either increased values-awareness, increased ability to deal with threats, or both. The overlap suggested that the two theoretical processes may work alongside each other. Only four identified either process as the main effect of participating, although lack of awareness of a psychological process does not comprise evidence of absence. Participants identified increased openness about their skin condition with others following participation in the research; this could be conceived as values-based (if one values relationships) or reduced-threat-based (feeling more able to risk being open), or may be a consequence of exposure during the initial discussion. Most participants identified feeling validated and heard as important processes within the research procedure. Some younger participants also identified increased levels of self-awareness resulting from the self-monitoring and nomothetic measures.

## Discussion

### Discussion of results

The research process benefitted most participants, but the mechanism of change is unclear. The cause of change may not have been the self-affirmation intervention. The hybrid design necessitated a complex procedure with four different processes: an initial discussion, nomothetic measures, self-monitoring, and the intervention. Arguably, agreeing to participate in the research comprises a fifth step, indicating willingness to confront the psychosocial difficulties associated with one's skin problem. Neither the completion of measures nor the initial discussion were originally conceived to be therapeutically significant.

The initial discussion was originally designed to be brief enough to avoid being a significant part of the procedure, but younger participants (recruited first) struggled to identify the ways in which they were most affected by their skin condition. A lengthy discussion about the psychosocial consequences of the individual's skin condition was required in order to select the idiographic measures. The discussion was empathic and sensitive, but did not involve specific psychologically-informed components.

The nomothetic measures were completed *before* the initial discussion and *after* the intervention; they cannot distinguish the impact of the discussion from the impact of the intervention. Hypotheses 2 and 3 are therefore unable to test the isolated impact of the self-affirmation intervention. The repeated measures theoretically isolated the effects of the intervention from the other processes. Only hypothesis 4, therefore, statistically tests the impact of self-affirmation upon skin-related distress. Further consideration of the pattern of change in the repeated measures is necessary. A

gradual change starting in the baseline would indicate change associated with the initial discussion or self-monitoring. An abrupt change post-intervention would indicate an immediate effect of self-affirmation, whereas a gradual change post-intervention would indicate a cumulative effect.

In the clustered analyses, skin-related frustration and restriction were significantly lower post-intervention, whilst concealment and preoccupation were significantly higher post-intervention. Frustration started to decrease within the pre-intervention period, whereas restriction decreased abruptly after the intervention. Theoretically, the initial discussion may have reduced frustration over time via validation and reduced shame (e.g. Thompson, 2009). The intervention may have reduced skin-related restriction by encouraging participants to choose what they want their life to be about: a significant theme for several participants. These interpretations are both supported by the qualitative data.

For participants who reported increased symptoms, reported concealment started to increase during the baseline and both concealment and preoccupation increased abruptly post-intervention. The increase was unexpected. It could indicate either *actual* increases in concealment and preoccupation, or increased awareness of or willingness to acknowledge concealment and preoccupation. Self-monitoring and the initial discussion may have increased awareness, and/or self-affirmation-related increased tolerance of threat may have enabled participants to acknowledge their level of preoccupation. This interpretation is speculative, but supported by the qualitative and DLQI data. The interpretation is also consistent with ACT studies, in which increased acceptance of symptoms and improved quality of life has been

accompanied by increased awareness and self-reports of symptoms (e.g. Bach & Hayes, 2002). However, it should be noted that in the repeated measures acceptance of the skin condition did not change. Furthermore, there was little overlap between people who rated concealment and preoccupation, and those who rated measures that showed improvement.

The repeated measures did not substantially support the hypothesis that self-affirmation benefits people distressed by their skin condition. Lack of support for hypothesis 4 relative to hypotheses 2 and 3 does not mean that the self-affirmation task did *not* significantly contribute to improvements in skin-related distress, only that there is not sufficient evidence that it did. Relative lack of support for hypothesis 4 may reflect the limitations of self-affirmation relative to discussion (or at least, over and above the effects of the discussion), or limitations of the idiographic measures. Participant differences in psychological awareness and articulation resulted in unavoidable inconsistency about the extent to which the idiographic measures captured the main difficulties for each participant. Reliability and validity have been well established for the nomothetic measures, but by definition not for the ideographic measures. Furthermore, the nomothetic and the idiographic measures had substantially different foci.

## **Limitations**

### *Design*

The main limitation is the inability to fully distinguish the effects of the self-affirmation intervention from the effects of the initial discussion and self-monitoring. The inclusion of a control group, for whom all aspects of the study would be identical except for the

self-affirmation intervention, would have enabled a more rigorous test of the hypothesis.

The replication of the procedure with 11 participants comprises a hybrid design with some of the richness of case study methodology as well as some generalisability to populations. However, the sample size does not meet the threshold for sufficiently powered group analyses, and yet is too large for fully detailed analyses on each participant.

#### *Participants*

Participants self-identified as feeling distressed by their skin condition, but three showed relatively low levels of pre-study distress in initial interview, and only five exceeded clinical cut-off levels in the nomothetic measures. Only participants who were distressed pre-study significantly benefited: this provides a strong rationale for screening for distress in dermatological patients.

In case study methodology, the degree to which participants are representative of whole populations is not pertinent. However, the current study included group analyses, and hence the degree of representativeness should be considered. Strengths include the range of dermatological conditions, whilst limitations include the gender imbalance, and the inclusion of predominantly white participants and self-selected university students.

#### *Measures*

The use of two different sets of measures for the different age groups is not ideal. However, this limitation was ameliorated by the use of adult and child measures from

the same authors and theoretical stance. Substantial overlap between clinical and nonclinical samples in all measures resulted in low CSC cut-offs: clinically significant but not reliable change should be interpreted cautiously. The reliable change criterion for the BAI was much higher than for other measures, reducing comparability.

Most participants had conditions that varied over time, and for several participants “flare-ups” were identifiable on the repeated measures. This resulted in unstable baselines, and in some cases significant serial dependency. This was unavoidable: change in how the condition affected participants over time necessarily involves both physical and psychosocial aspects of the skin condition. The impact of other life events upon changes in mood should also be considered, e.g. exams and holidays. These limitations are unavoidable in “real-world” research.

#### *Procedure*

Unlike previous self-affirmation research, most participants were aware that self-affirmation was intended to reduce skin-related distress. This may have undermined the intervention (Sherman et al, in press) or resulted in demand characteristics, particularly in the exit interview. Measures were taken to reduce any pressure to be positive in the exit interview. The strength of conclusions about the permanence of the intervention is limited by relatively short follow-ups.

#### *Analyses*

Multiple analyses were used on the individual repeated measures, and probabilities were reported without Bonferroni correction. With a threshold of  $p < 0.05$ , it is statistically likely that one or more of the analyses would have significant results due to chance (Type 1 error). Presentation of uncorrected probabilities is justifiable



because of the exploratory nature of the research, and because the participants represent replications of the procedure. Conversely, at  $N=11$  group analyses were underpowered (Type 2 error). Social pressures change considerably between 11 and 21, particularly around relationships, and participants had a variety of dermatological conditions; this potentially caused substantial “noise” within the data, thus further reducing the power.

The clustered averages improve the clarity of presentation, but at the cost of individual differences. A flavour of individual differences is presented by the inclusion of the individuals’ linear regression trendlines. However, the mean percentage of variance explained by the trendlines is low (mean: 12%, range: 0.005% to 71%). Notwithstanding, the analyses give a substantially richer, more detailed account of the impact of the intervention than is typically provided.

### **Theoretical implications**

Psychotherapeutic evaluation research is limited in this area (Ersser et al., 2007). The present study hence combines an under-studied population with an under-utilised research method. In-depth exploration of individual participants and patterns of change has enabled a greater understanding of *how* and *why* participation has been beneficial, providing a richer analysis than is feasible in a single time-point laboratory experiment. A key finding, that participants found the discussion to be as significant as the intervention, would have remained uncovered with other methodologies. Although RCTs are necessary to establish the impact of an intervention within a population, this research supports the need for case study and qualitative methodologies in the development of interventions.

The present study explored the applicability of self-affirmation theory to the difficulties faced by young people subjected to threats to the self, due to perceived or actual responses to their dermatological condition. Apart from Cohen et al. (2006), there has been little longitudinal application of self-affirmation theory to real-world, naturally-occurring threats. Only participants who reported significant baseline distress reported significant improvements in well-being: predicted by self-affirmation theory and consistent with Cohen et al.

This is the first study to report the qualitative effects of self-affirmation. Participants were positive about the intervention, but less than half of participants perceived self-affirmation to be the most significant component. Participants may not have been consciously aware of the mechanism for change. Sherman et al. (in press) report that participants are rarely aware of self-affirmation processes, and that awareness is not only unnecessary but can actually reduce the effectiveness of interventions.

More participants identified changes in values awareness or values-based living than identified changes in their perception of or coping around threat. Consideration of personal values has been used for both self-affirmation (McQueen & Klein, 2006) and increasing values-based living (Newton, 2009). Long-term effects of values-based self-affirmation may involve reduced psychological threat and/or increased values-based living. Further research to uncover the mechanism for change would be interesting. This could include longitudinal evaluation of changes in values-based living and subjectively perceived threat.

None of the participants who identified significant benefits from self-affirmation were male, although low baseline distress may have affected results. Little research has considered gender differences in self-affirmation, and the literature reports a dominance of female participants (McQueen & Klein, 2006). Further research is required to explore whether there are gender differences in the utility of self-affirmation.

The qualitative effects of skin conditions described herein accord with previous research (e.g. Thompson & Worthington, 2007). This strengthens previous findings of the impact of skin conditions on life quality, and provides evidence that the current participants are representative of people with skin-related distress. No previous research has reported the qualitative effects of an intervention for people with skin-related distress. Qualitative changes identified include reduced concealment and FNE, which have been identified in previous research as critical in mediating the association between skin conditions and distress (e.g. Leary et al., 1998 and Thompson et al., 2002), as well as increased values-based living, associated with improved well-being (Newton, 2009). Interestingly, the qualitative data is at odds with some of the repeated measures data, which reported increased concealment and unchanged FNE. The differences may reflect inherent differences in the measurements, demand characteristics at exit interview, or a delayed benefit from the intervention following cumulative changes.

### **Clinical implications**

Methodological limitations restricted the level of specific support for the use of self-affirmation, but most participants did report significant improvement. The research

hence revealed that psychosocial difficulties in young people with skin conditions can be alleviated with a brief psychological intervention, although whether the critical factor was sensitive discussion, self-affirmation or both requires further clarification. The research also demonstrates that self-monitoring, honest communication about the impact of a skin condition, and a simple psychosocial intervention, were all acceptable to, and feasible for, this hard-to-access group.

Most participants identified talking about their skin problem as one of the most significant aspects of the research ( $N=6$ ), followed by self-affirmation ( $N=5$ ). The first two sessions might therefore both be considered psychotherapeutically significant, and hence the research process more closely resembled a “two plus one” intervention model (Barkham, 1989) than a specific test of self-affirmation. The research provides evidence that a very limited level of clinical input can result in significant psychosocial benefits.

The research procedure is consistent with Acceptance and Commitment Therapy, (Hayes et al., 1999). Within ACT, personal values are used as motivators to enable acceptance of unwanted but unchangeable experiences. Acceptance of skin conditions has been a significant theme both in the present study and in previous research (e.g. Thompson et al., 2002). Within the present research, agreeing to participate and monitor skin-related distress and avoidance indicates willingness to acknowledge unwanted thoughts and feelings about one’s skin condition, a key stage of acceptance. According to ACT, consideration of one’s values alongside consideration of the effects of avoidance behaviours causes dissonance: the person becomes aware that their avoidance-based actions reduce their opportunities for values-based actions. The

person realises that they can choose whether to continue trying to avoid distress, or whether to live more fully in accordance with their values. Several participants identified such dissonance and the resultant awareness of choice over their actions in the exit interview. The present research hence provides evidence to support a brief ACT-consistent intervention for skin-related distress.

In the present study, participants with low baseline distress reported little benefit and some deterioration. This could indicate that increasing the salience of skin conditions and the awareness of skin-related difficulties is actually detrimental to those with low baseline distress. This is consistent with expressive writing research, which has reported increased short-term distress from writing about traumatic experiences (e.g. Symth, 1998). Deterioration could be explained by bringing a person into contact with previously defended-against distress, *or* by provoking increased rumination on and fretting about a condition which had previously felt benign. Consistent with the former explanation, several participants indicated that they had not realised how much they had been restricted by their skin. Irrespective of cause, the disparity in outcome for those with high versus low baseline distress suggests a need for clinical screening prior to intervention.

Participants identified a need for greater support with the psychosocial impact of their skin condition. The qualitative data suggested that several participants just wanted someone to listen to them and validate their distress. For some, being open about their condition with one person enabled them to be more open with others; other participants (particularly those with more common conditions such as eczema and acne) said that simple validation of their distress was beneficial.

However, an optional counselling service might not meet this population's needs. In addition to shame about their condition, many participants reported feeling shame about their skin-related distress (Thompson & Kent, 2001). The framing of participation as helping with research rather than needing help for oneself increased its acceptability: one participant said he would have been unlikely to talk to a counsellor because that would have felt like he was not coping "properly". It might therefore be more acceptable to this population if distress was normalised by their GP, and/or if they were given "an empathic and sensitive nursing 'assessment'" as part of a holistic treatment package (Thompson, 2009, p46).

### **Future directions**

The study indicates that young people with skin-related distress engage in and benefit from a brief psychologically informed intervention that could be implemented by nursing staff within a primary care setting. Further research is required to clarify the relative benefits of empathic discussion, self-affirmation, and self-monitoring, as well as to determine the mechanism by which values-based self-affirmation is beneficial in the longer-term. The current research furthermore provides some indication that gender, age and/or baseline distress may impact upon the utility of self-affirmation interventions: further research is needed due to the small participant numbers.

## Conclusions

The present study evaluated a brief ACT-consistent intervention involving values-based self-affirmation, for young people with skin-related distress. Multiple evaluation methods indicated that, post-intervention, participants had significant reductions in depression, anxiety, skin-related frustration, and skin-related lifestyle restrictions. Participants also reported greater preoccupation with and concealment of their skin, although qualitative data suggested that this reflected increased self-awareness rather than increased symptoms *per se*. In line with self-affirmation theory, high baseline distress levels seemed particularly important in determining who might benefit

Participants reported qualitative increases in values-based living, increased openness with others about their condition, and reductions in skin-related threats to self-integrity. The long-term impact of values-based self-affirmation may therefore include both maintained self-integrity *and* increased values salience.

The mechanism of change was unclear. Most participants did not directly attribute change to the self-affirmation intervention, but instead identified the opportunity to discuss their skin-related distress as the most significant component. Self-monitoring also led to increased self-awareness and hence increased agency for some participants.

Skin-related distress in young people can therefore be significantly reduced by an ACT-consistent psychosocial intervention involving empathic validation of distress, self-monitoring, and values-based self-affirmation. The intervention, or its component parts, could be implemented by nursing staff within a primary care setting. Further research with more participants is required to clarify the active components.

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28 July 2009

Lisa Newton  
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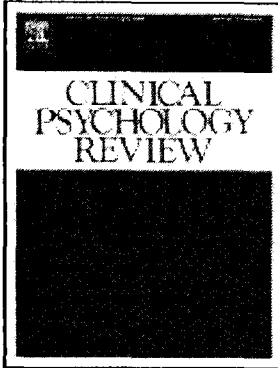
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## Clinical Psychology Review: Guidelines for authors



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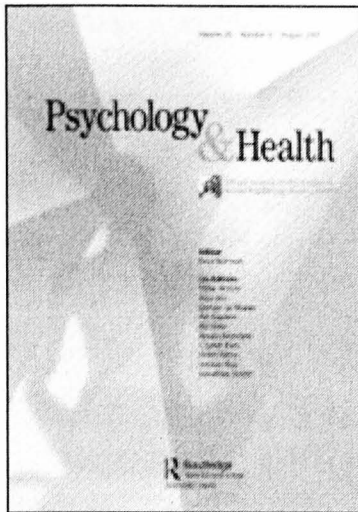
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**Subjects:** Allied Health; Behavioral Medicine; Health & Illness; Health Psychology;  
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**Publisher:** Routledge

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recommendations for improving the quality of reports of parallel-group randomized trials. *Annals of Internal Medicine*, 134, 657-662).

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Appendix B: Ethical approval from the South Yorkshire Research  
Ethics Committee (NHS)

Appendix B: Ethical approval



**National Research Ethics Service**

**South Yorkshire Research Ethics Committee**

1st Floor Vickers Corridor  
Northern General Hospital  
Herries Road  
Sheffield  
S5 7AU

Telephone: 0114 226 9153  
Facsimile: 0114 256 2469  
Email: joan.brown@sth.nhs.uk

15 September 2008

Dr Lisa Newton  
Trainee Clinical Psychologist  
University of Sheffield  
Clinical Psychology Unit  
Western Bank  
Sheffield  
S10 2TP

Dear Dr Newton

Full title of study: Self affirmation for young people with a distressing  
dermatological condition  
REC reference number: 08/H1310/56

Thank you for your letter of 21 August 2008, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

**Confirmation of ethical opinion**

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

**Ethical review of research sites**

The Committee has designated this study as exempt from site-specific assessment (SSA). The favourable opinion for the study applies to all sites involved in the research. There is no requirement for other Local Research Ethics Committees to be informed or SSA to be carried out at each site.

**Conditions of the favourable opinion**

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

**Ethical Approval from the University of Sheffield Ethics  
Committee**

**Date:** Thu, 26 Mar 2009 13:10:52 +0000

**From:** "[p.sheeran@sheffield.ac.uk](mailto:p.sheeran@sheffield.ac.uk)" <[paschal.sheeran@googlemail.com](mailto:paschal.sheeran@googlemail.com)>

**To:** [pcp06ldn@sheffield.ac.uk](mailto:pcp06ldn@sheffield.ac.uk)

**Cc:** [Andrew Thompson <a.r.thompson@sheffield.ac.uk>](mailto:a.r.thompson@sheffield.ac.uk), [Peter Harris <p.harris@sheffield.ac.uk>](mailto:p.harris@sheffield.ac.uk), [Josie Levick <j.levick@sheffield.ac.uk>](mailto:j.levick@sheffield.ac.uk)

**Subject:** Ethics of "Self-affirmation for young people with a distressing dermatological condition"

Dear Lisa,

Thank you for your submission to the Department of Psychology Ethics Committee (DESC; "Self-affirmation for young people with a distressing dermatological condition").

I now have recommendations from three reviewers. We each agreed independently that the method and procedures in your study satisfy the ethics guidelines of the BPS. I am therefore pleased to inform you that the ethics of your research are approved.

Please note that this approval does not pertain to recruitment via the Children's Hospital or other NHS premises. Separate NHS Ethics Approval will be needed if you pursue this route.

Yours sincerely

Paschal Sheeran

Chair,

DESC

--

[p.sheeran@sheffield.ac.uk](mailto:p.sheeran@sheffield.ac.uk)  
<http://sheeran.socialpsychology.org/>

## Appendix C: Nomothetic, standardised measures

## Beck Youth Inventory – Depression

Here is a list of things that happen to people and that people think or feel. Read each sentence carefully, and circle the one word (Never, Sometimes, Often, or Always) that tells about you best, especially in the last two weeks. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3
41. I think that my life is bad.	Never	Sometimes	Often	Always
42. I have trouble doing things.	Never	Sometimes	Often	Always
43. I feel that I am a bad person.	Never	Sometimes	Often	Always
44. I wish I were dead.	Never	Sometimes	Often	Always
45. I have trouble sleeping.	Never	Sometimes	Often	Always
46. I feel no one loves me.	Never	Sometimes	Often	Always
47. I think bad things happen because of me.	Never	Sometimes	Often	Always
48. I feel lonely.	Never	Sometimes	Often	Always
49. My stomach hurts.	Never	Sometimes	Often	Always
50. I feel like bad things happen to me.	Never	Sometimes	Often	Always
51. I feel like I am stupid.	Never	Sometimes	Often	Always
52. I feel sorry for myself.	Never	Sometimes	Often	Always
53. I think I do things badly.	Never	Sometimes	Often	Always
54. I feel bad about what I do.	Never	Sometimes	Often	Always
55. I hate myself.	Never	Sometimes	Often	Always
56. I want to be alone.	Never	Sometimes	Often	Always
57. I feel like crying.	Never	Sometimes	Often	Always
58. I feel sad.	Never	Sometimes	Often	Always
59. I feel empty inside.	Never	Sometimes	Often	Always
60. I think my life will be bad.	Never	Sometimes	Often	Always

BDI-Y  
Total RS

Appendix C: Nomothetic, standardised measures used in thesis

**Beck Youth Inventory – Anxiety**

Here is a list of things that happen to people and that people think or feel. Read each sentence carefully, and circle the one word (Never, Sometimes, Often, or Always) that tells about you best, especially in the last two weeks. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3
21. I worry someone might hurt me at school.	Never	Sometimes	Often	Always
22. My dreams scare me.	Never	Sometimes	Often	Always
23. I worry when I am at school.	Never	Sometimes	Often	Always
24. I think about scary things.	Never	Sometimes	Often	Always
25. I worry people might tease me.	Never	Sometimes	Often	Always
26. I am afraid that I will make mistakes.	Never	Sometimes	Often	Always
27. I get nervous.	Never	Sometimes	Often	Always
28. I am afraid I might get hurt.	Never	Sometimes	Often	Always
29. I worry I might get bad grades.	Never	Sometimes	Often	Always
30. I worry about the future.	Never	Sometimes	Often	Always
31. My hands shake.	Never	Sometimes	Often	Always
32. I worry I might go crazy.	Never	Sometimes	Often	Always
33. I worry people might get mad at me.	Never	Sometimes	Often	Always
34. I worry I might lose control.	Never	Sometimes	Often	Always
35. I worry.	Never	Sometimes	Often	Always
36. I have problems sleeping.	Never	Sometimes	Often	Always
37. My heart pounds.	Never	Sometimes	Often	Always
38. I get shaky.	Never	Sometimes	Often	Always
39. I am afraid that something bad might happen to me.	Never	Sometimes	Often	Always
40. I am afraid that I might get sick.	Never	Sometimes	Often	Always
				BAI-Y Total RS


**Beck Youth Inventory – Self Concept**

Here is a list of things that happen to people and that people think or feel. Read each sentence carefully, and circle the one word (Never, Sometimes, Often, or Always) that tells about you best. THERE ARE NO RIGHT OR WRONG ANSWERS.

	0	1	2	3
1. I work hard.	Never	Sometimes	Often	Always
2. I feel strong.	Never	Sometimes	Often	Always
3. I like myself.	Never	Sometimes	Often	Always
4. People want to be with me.	Never	Sometimes	Often	Always
5. I am just as good as the other kids.	Never	Sometimes	Often	Always
6. I feel normal.	Never	Sometimes	Often	Always
7. I am a good person.	Never	Sometimes	Often	Always
8. I do things well.	Never	Sometimes	Often	Always
9. I can do things without help.	Never	Sometimes	Often	Always
10. I feel smart.	Never	Sometimes	Often	Always
11. People think I'm good at things.	Never	Sometimes	Often	Always
12. I am kind to others.	Never	Sometimes	Often	Always
13. I feel like a nice person.	Never	Sometimes	Often	Always
14. I am good at telling jokes.	Never	Sometimes	Often	Always
15. I am good at remembering things.	Never	Sometimes	Often	Always
16. I tell the truth.	Never	Sometimes	Often	Always
17. I feel proud of the things I do.	Never	Sometimes	Often	Always
18. I am a good thinker.	Never	Sometimes	Often	Always
19. I like my body.	Never	Sometimes	Often	Always
20. I am happy to be me.	Never	Sometimes	Often	Always
			BSCI-Y Total FS	

**Beck Depression Inventory-II (BDI-II)**

Date: \_\_\_\_\_



Name: \_\_\_\_\_ Marital Status: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Occupation: \_\_\_\_\_ Education: \_\_\_\_\_

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

<p><b>1. Sadness</b></p> <p>0 I do not feel sad.</p> <p>1 I feel sad much of the time.</p> <p>2 I am sad all the time.</p> <p>3 I am so sad or unhappy that I can't stand it.</p> <p><b>2. Pessimism</b></p> <p>0 I am not discouraged about my future.</p> <p>1 I feel more discouraged about my future than I used to be.</p> <p>2 I do not expect things to work out for me.</p> <p>3 I feel my future is hopeless and will only get worse.</p> <p><b>3. Past Failure</b></p> <p>0 I do not feel like a failure.</p> <p>1 I have failed more than I should have.</p> <p>2 As I look back, I see a lot of failures.</p> <p>3 I feel I am a total failure as a person.</p> <p><b>4. Loss of Pleasure</b></p> <p>0 I get as much pleasure as I ever did from the things I enjoy.</p> <p>1 I don't enjoy things as much as I used to.</p> <p>2 I get very little pleasure from the things I used to enjoy.</p> <p>3 I can't get any pleasure from the things I used to enjoy.</p> <p><b>5. Guilty Feelings</b></p> <p>0 I don't feel particularly guilty.</p> <p>1 I feel guilty over many things I have done or should have done.</p> <p>2 I feel quite guilty most of the time.</p> <p>3 I feel guilty all of the time.</p>	<p><b>6. Punishment Feelings</b></p> <p>0 I don't feel I am being punished.</p> <p>1 I feel I may be punished.</p> <p>2 I expect to be punished.</p> <p>3 I feel I am being punished.</p> <p><b>7. Self-Dislike</b></p> <p>0 I feel the same about myself as ever.</p> <p>1 I have lost confidence in myself.</p> <p>2 I am disappointed in myself.</p> <p>3 I dislike myself.</p> <p><b>8. Self-Criticalness</b></p> <p>0 I don't criticize or blame myself more than usual.</p> <p>1 I am more critical of myself than I used to be.</p> <p>2 I criticize myself for all of my faults.</p> <p>3 I blame myself for everything bad that happens.</p> <p><b>9. Suicidal Thoughts or Wishes</b></p> <p>0 I don't have any thoughts of killing myself.</p> <p>1 I have thoughts of killing myself, but I would not carry them out.</p> <p>2 I would like to kill myself.</p> <p>3 I would kill myself if I had the chance.</p> <p><b>10. Crying</b></p> <p>0 I don't cry anymore than I used to.</p> <p>1 I cry more than I used to.</p> <p>2 I cry over every little thing.</p> <p>3 I feel like crying, but I can't.</p>
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## Appendix C: Nomothetic, standardised measures used in thesis

<p><b>11. Agitation</b></p> <p>0 I am no more restless or wound up than usual.</p> <p>1 I feel more restless or wound up than usual.</p> <p>2 I am so restless or agitated that it's hard to stay still.</p> <p>3 I am so restless or agitated that I have to keep moving or doing something.</p> <p><b>12. Loss of Interest</b></p> <p>0 I have not lost interest in other people or activities.</p> <p>1 I am less interested in other people or things than before.</p> <p>2 I have lost most of my interest in other people or things.</p> <p>3 It's hard to get interested in anything.</p> <p><b>13. Indecisiveness</b></p> <p>0 I make decisions about as well as ever.</p> <p>1 I find it more difficult to make decisions than usual.</p> <p>2 I have much greater difficulty in making decisions than I used to.</p> <p>3 I have trouble making any decisions.</p> <p><b>14. Worthlessness</b></p> <p>0 I do not feel I am worthless.</p> <p>1 I don't consider myself as worthwhile and useful as I used to.</p> <p>2 I feel more worthless as compared to other people.</p> <p>3 I feel utterly worthless.</p> <p><b>15. Loss of Energy</b></p> <p>0 I have as much energy as ever.</p> <p>1 I have less energy than I used to have.</p> <p>2 I don't have enough energy to do very much.</p> <p>3 I don't have enough energy to do anything.</p> <p><b>16. Changes in Sleeping Pattern</b></p> <p>0 I have not experienced any change in my sleeping pattern.</p> <hr/> <p>1a I sleep somewhat more than usual.</p> <hr/> <p>1b I sleep somewhat less than usual.</p> <hr/> <p>2a I sleep a lot more than usual.</p> <hr/> <p>2b I sleep a lot less than usual.</p> <hr/> <p>3a I sleep most of the day.</p> <hr/> <p>3b I wake up 1-2 hours early and can't get back to sleep.</p>	<p><b>17. Irritability</b></p> <p>0 I am no more irritable than usual.</p> <p>1 I am more irritable than usual.</p> <p>2 I am much more irritable than usual.</p> <p>3 I am irritable all the time.</p> <p><b>18. Changes in Appetite</b></p> <p>0 I have not experienced any change in my appetite.</p> <hr/> <p>1a My appetite is somewhat less than usual.</p> <hr/> <p>1b My appetite is somewhat greater than usual.</p> <hr/> <p>2a My appetite is much less than before.</p> <hr/> <p>2b My appetite is much greater than usual.</p> <hr/> <p>3a I have no appetite at all.</p> <hr/> <p>3b I crave food all the time.</p> <p><b>19. Concentration Difficulty</b></p> <p>0 I can concentrate as well as ever.</p> <p>1 I can't concentrate as well as usual.</p> <p>2 It's hard to keep my mind on anything for very long.</p> <p>3 I find I can't concentrate on anything.</p> <p><b>20. Tiredness or Fatigue</b></p> <p>0 I am no more tired or fatigued than usual.</p> <p>1 I get more tired or fatigued more easily than usual.</p> <p>2 I am too tired or fatigued to do a lot of the things I used to do.</p> <p>3 I am too tired or fatigued to do most of the things I used to do.</p> <p><b>21. Loss of Interest in Sex</b></p> <p>0 I have not noticed any recent change in my interest in sex.</p> <p>1 I am less interested in sex than I used to be.</p> <p>2 I am much less interested in sex now.</p> <p>3 I have lost interest in sex completely.</p>
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Subtotal Page 2

Subtotal Page 1

Total Score

NR15645

3 4 5 0 7 6 9 10 11 12 A B C D E

## Beck Anxiety Inventory (BAI)



NAME \_\_\_\_\_ DATE \_\_\_\_\_

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by each symptom during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

	NOT AT ALL	MILDLY It did not bother me much.	MODERATELY It was very unpleasant, but I could stand it.	SEVERELY I could barely stand it.
1. Numbness or tingling.				
2. Feeling hot.				
3. Wobbliness in legs.				
4. Unable to relax.				
5. Fear of the worst happening.				
6. Dizzy or lightheaded.				
7. Heart pounding or racing.				
8. Unsteady.				
9. Terrified.				
10. Nervous.				
11. Feelings of choking.				
12. Hands trembling.				
13. Shaky.				
14. Fear of losing control.				
15. Difficulty breathing.				
16. Fear of dying.				
17. Scared.				
18. Indigestion or discomfort in abdomen.				
19. Faint.				
20. Face flushed.				
21. Sweating (not due to heat).				

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## Dermatology Life Quality Index (DLQI)

### DERMATOLOGY LIFE QUALITY INDEX

<b>DLQI</b>
-------------

Hospital No:

Date:

Name:

Score:

Address:

Diagnosis:

**The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please tick ~~one~~ one box for each question.**

- |    |                                                                                                                                                |                                              |                                                                                                              |                                       |
|----|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------|
| 1. | Over the last week, how <b>itchy, sore, painful</b> or <b>stinging</b> has your skin been?                                                     | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> |                                       |
| 2. | Over the last week, how <b>embarrassed</b> or <b>self conscious</b> have you been because of your skin?                                        | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> |                                       |
| 3. | Over the last week, how much has your skin interfered with you going <b>shopping</b> or looking after your <b>home</b> or <b>garden</b> ?      | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 4. | Over the last week, how much has your skin influenced the <b>clothes</b> you wear?                                                             | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 5. | Over the last week, how much has your skin affected any <b>social</b> or <b>leisure</b> activities?                                            | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 6. | Over the last week, how much has your skin made it difficult for you to do any <b>sport</b> ?                                                  | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 7. | Over the last week, has your skin prevented you from <b>working</b> or <b>studying</b> ?                                                       | Yes<br>No                                    | <input type="checkbox"/><br><input type="checkbox"/>                                                         | Not relevant <input type="checkbox"/> |
|    | If "No", over the last week how much has your skin been a problem at <b>work</b> or <b>studying</b> ?                                          | A lot<br>A little<br>Not at all              | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                             |                                       |
| 8. | Over the last week, how much has your skin created problems with your <b>partner</b> or any of your <b>close friends</b> or <b>relatives</b> ? | Very much<br>A lot<br>A little<br>Not at all | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> | Not relevant <input type="checkbox"/> |
| 9. | Over the last week, how much has your                                                                                                          | Very much                                    | <input type="checkbox"/>                                                                                     |                                       |

## Appendix C: Nomothetic, standardised measures used in thesis

- skin caused any sexual difficulties?
- A lot
- A little
- Not at all  Not relevant
10. Over the last week, how much of a problem has the **treatment** for your skin been, for example by making your home messy, or by taking up time?
- Very much
- A lot
- A little
- Not at all  Not relevant

**Please check you have answered EVERY question. Thank you.**

AY Finlay, GK Khan, April 1992 [www.dermatology.org.uk](http://www.dermatology.org.uk), this must not be copied without the permission of the authors.

## Children's Dermatology Life Quality Index (CDLQI)

### CHILDREN'S DERMATOLOGY LIFE QUALITY INDEX

Hospital No

Name:

CDLQI

Diagnosis:

Age:

SCORE:

Address:

Date:

**The aim of this questionnaire is to measure how much your skin problem has affected you OVER THE LAST WEEK. Please tick 4 one box for each question.**

- |    |                                                                                                                                                                                                         |                                                                                                                                                                                                                                                          |                                                                                                                                                          |                                                                                                                                                                                                                              |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Over the last week, how <b>itchy</b> , " <b>scratchy</b> ", <b>sore</b> or <b>painful</b> has your skin been?                                                                                           | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |
| 2. | Over the last week, how <b>embarrassed</b> or <b>self conscious</b> , <b>upset</b> or <b>sad</b> have you been because of your skin?                                                                    | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |
| 3. | Over the last week, how much has your skin affected your <b>friendships</b> ?                                                                                                                           | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |
| 4. | Over the last week, how much have you changed or worn <b>different</b> or <b>special clothes/shoes</b> because of your skin?                                                                            | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |
| 5. | Over the last week, how much has your skin trouble affected <b>going out</b> , <b>playing</b> , or <b>doing hobbies</b> ?                                                                               | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |
| 6. | Over the last week, how much have you avoided <b>swimming</b> or <b>other sports</b> because of your skin trouble?                                                                                      | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |
| 7. | <p><u>Last week,</u><br/>was it<br/><b>school time</b>?</p> <p style="text-align: center;"><b>OR</b></p> <p>was it<br/><b>holiday time</b>?</p>                                                         | <p><b>If school time:</b> Over the last week, how much did your skin problem affect your <b>school work</b>?</p> <p><b>If holiday time:</b> How much over the last week, has your skin problem interfered with your enjoyment of the <b>holiday</b>?</p> | <p>Prevented school<br/>Very much<br/>Quite a lot<br/>Only a little<br/>Not at all</p> <p>Very much<br/>Quite a lot<br/>Only a little<br/>Not at all</p> | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> |
| 8. | Over the last week, how much trouble have you had because of your skin with other people <b>calling you names</b> , <b>teasing</b> , <b>bullying</b> , <b>asking questions</b> or <b>avoiding you</b> ? | Very much<br>Quite a lot<br>Only a little<br>Not at all                                                                                                                                                                                                  | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/>                                             |                                                                                                                                                                                                                              |

Appendix C: Nomothetic, standardised measures used in thesis

9. Over the last week, how much has your **sleep** been affected by your skin problem?
- Very much   
Quite a lot   
Only a little   
Not at all
10. Over the last week, how much of a problem has the **treatment** for your skin been?
- Very much   
Quite a lot   
Only a little   
Not at all

**Please check that you have answered EVERY question. Thank you.**

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## Appendix D: Daily repeated measures (by participant and theme)

Participant	Daily statements	0 - 10	Theme
1 Female, 11, haemangioma	I felt confident	Not at all – very	Confidence
	I wanted to avoid my leg being seen today	Didn't mind – minded a lot	Concealment
	I was thinking about my leg today	Not at all - loads	Preoccupation
2 Female, 12 Keloid scar, eczema	I've been able to talk to people without worrying what they are thinking about my skin	A lot – Not at all	FNE (scores reversed to fit FNE theme)
	My skin has upset me today	All the time – None of the time	Frustration/upset
	I've tried to hide my scar today	Really worried about it – Not at all worried about it	Concealment
3 Female, 15 Acne	I felt confident	Not at all – Extremely	Confidence
	I felt like my skin held me back from sports	Not at all – All the time	Restriction
	I was thinking about my skin today	Not at all – All the time	Preoccupation
4 Female, 15 Acne	My level of confidence today was...	Really self-conscious – really confident	Confidence
	I've checked my skin today	Not at all – All the time	Checking
	I've worried about my skin today	Not at all – All the time	Preoccupation
5 Male, 12 Eczema	I felt confident today	Not at all – Extremely	Confidence
	I have thought about my skin today	Not at all – all of the time	Preoccupation
	I have checked my skin today	Not at all – all of the time	Checking
6 Male, 14 Eczema	I felt confident today	Not at all – Extremely	Confidence
	I felt scared being around people today	None of the time – all of the time	FNE
	I've tried to hide my skin today	None of the time – all of the time	Concealment
7 Male, 14 Eczema, Acne	I felt confident today	Very self-conscious – very confident	Confidence
	I felt I had to hide my arms today	Didn't even think about it – Long sleeved tops , arms hidden all day	Concealment
	I've been worrying about my skin today when I've been doing sports	Not at all worried – extremely worried	Preoccupation

Appendix D: Daily repeated measures used in thesis

Participant	Daily statements	0 - 10	Theme
8 Female, 19 Eczema, acne, impetigo, scars, etc	I felt ok about my skin today	Wanted to rip it off – totally fine with it	Acceptance
	I've tried to hide my skin today	Not worried about it – extremely worried about it	Concealment
	I have checked my skin today	Not at all – constantly	Checking
9 Female, 20 Eczema	I felt attractive today	Not at all - attractive	Confidence
	I've worried about what people think of my skin today	Not very worried – extremely worried	FNE
	My skin has affected what I wore today	Not at all – completely prevented me from wearing what I wanted	Concealment
10 Female, 20 Eczema	I've felt happy about my skin today	Very unhappy – Very happy	Acceptance
	I've felt frustrated about my skin today	Not at all - constantly	Frustration/upset
	I've been checking my skin today	Not at all - constantly	Checking
11 Male, 19 Psoriasis, Keloid scar	I felt good about my skin today	Not good at all – really good	Acceptance
	I felt restricted by my skin today	Not at all – constantly	Restriction
	I couldn't relax because of my skin today	Not at all – most of the time	Frustration/upset



## Appendix E: A glossary of selected skin conditions

**Acne:** Common, although varies in severity. Can cause scarring. Acne is a recurrent condition, which can be exacerbated by psychosocial stressors.

**Eczema:** Atopic dermatitis – skin inflammation. Can include dryness, rashes, itching, swellings, redness and blistering. Scratching the skin can cause bleeding and scarring. Eczema is a recurrent condition, which can be exacerbated by psychosocial stressors.

**Haemangioma:** A benign tumour that presents as a red lump on the skin. Unusual past the age of 10. Participant 1 had a visible haemangioma on her leg, which caused reduced leg muscle; her legs were hence difference sizes.

**Impetigo:** A non-permanent bacterial infection, which causes light coloured scabs.

**Keloid scarring:** A permanent, non-contagious growth caused by overgrowth of tissue at the site of a healed skin injury. Often itchy and/or painful.

**Phymatous rosacea:** A chronic condition characterised by facial redness and swelling

Appendix E: A glossary of selected skin conditions

**Psoriasis:** A chronic, non-contagious autoimmune disease which causes excessive skin production. This results in red, scaly patches on the skin. Psoriasis is a recurrent condition, which can be exacerbated by psychosocial stressors.

**Vitiligo:** A chronic condition that causes permanent de-pigmentation in patches of skin.

Information has been taken from: Thompson, A. (2009), Walker, C and Papadopoulos, L (2005), and supplemented by <http://en.wikipedia.org> where necessary (July 2009).

## Appendix F: Initial research pack (recruitment method 1)



Department Of Psychology.

Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training & consultancy  
Clinical Psychology Unit, Department of Psychology, University of Sheffield  
Bank, Sheffield S10 2TN

Dear Parent,

My name is Lisa Newton. I am doing some research with young people (aged 11 to 15) with skin conditions as part of my training to be a Clinical Psychologist. Some young people feel that their skin condition can sometimes make it difficult to be with other people, or can make them feel sad, cross or nervous. I am interested in trying to develop a way to help people feel better about themselves. Do you think your son or daughter would be interested in taking part?

### What does the study involve?

I will ask people who are interested in taking part to fill out some sheets about how they feel. The answers to these sheets will tell me whether or not the person is suitable for the study. The study will involve me meeting your child four times. The meetings can take place at the university, at your home or at your child's school. On the first meeting, I will want to talk to your child about how they feel about their skin condition. On the basis of this talk, your child and I will decide on three things for your child to rate daily (for example, "I have felt uncomfortable being around others today") for six weeks. One of these three measures will have a positive focus (e.g. "I have been able to take part in sports without worrying about my skin today"). Your child and I will also complete some measures about how your child feels about themselves and their skin condition. On the second meeting (three weeks later) I will ask your child to write about something that matters to them. It's not a test; there are no right or wrong answers and spelling and punctuation will not matter for my research. The third meeting (three weeks after the second) and fourth meeting (three months later) are follow-up meetings, to find out whether there has been any change in how your child feels about themselves and their skin condition.

## Appendix F: Initial research pack (recruitment method 1)

I hope that people who take part in my research will find it useful, but it might have no effect. All participants will receive a £10 Amazon gift voucher to cover their time and expenses.

### What next?

If you think that your child might want to take part in this research, please give them the information sheet and contact form enclosed with this letter. If your child decides that they would like to take part, they can fill out the form and I will send more information. Either of you can still change your minds at any point without having to give a reason.

If you want to ask me any questions you can leave a message with Christie Harrison (research support officer) on 0114 2226650. You could also email me at this address: [emaillisanewton-research@yahoo.co.uk](mailto:emaillisanewton-research@yahoo.co.uk)



Thank you for reading this letter.

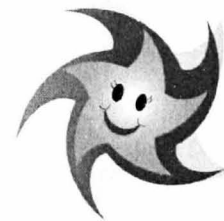
Yours faithfully,

Dr Lisa Newton



Department Of Psychology.  
**Clinical Psychology Unit.**  
Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training  
consultancy.  
Clinical Psychology Unit, Department of Psychology, University  
Sheffield, Western Bank, Sheffield S10 2TN

**Investigating the use of writing for young people who are distressed by their skin condition: Information for people who are thinking of taking part.**



Hello. My name is Lisa Newton. I am doing some research with people with skin conditions as part of my training to be a clinical psychologist. Some people feel that their skin condition can sometimes make it difficult to be with other people, or can make them feel sad, cross or nervous. Does that sound like you? If so, I'd like you to think about taking part in my research.

**What's it about?**

I want to know more about how people feel about themselves and their skin condition. I want to know whether a short writing task will have an effect on how people feel.

**What will it involve?**



If you decide to take part, I would like to meet with you four times. On one of these times I will ask you to write about something that matters to you. It's not a test. There are no right or wrong answers and spelling and punctuation don't matter for my research. You can meet me at the university, or I can meet you at your home or school if you would

prefer. I would also like you to spend a couple of minutes a day keeping a record of how you feel, for six weeks. I will give each person who takes part a £10 Amazon gift voucher to cover their time and expenses.


### What if I change my mind?

No problem. You can change your mind at any point, without having to give a reason.

### Can everyone take part?

I want to recruit people aged 11-15 who feel distressed by their skin condition. I will ask people who are interested in taking part to fill out some sheets about how they feel. The answers to these sheets will tell me whether or not the person is suitable for the study.

### What next?

If you are interested, please fill out the form enclosed and send it back to me in  the freepost envelope or leave it with your nurse. I will need your parent or guardian's signature. I will then send you out some more information. If you want to ask me some questions you can leave a message asking me to contact you with Christie Harrison (research support officer) on 0114 2226650.



You could also email me at this address: [emaillisanewton-research@yahoo.co.uk](mailto:emaillisanewton-research@yahoo.co.uk).



Department Of Psychology.

**Clinical Psychology Unit.**

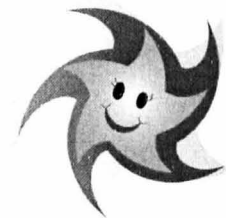
Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training  
consultancy.

Clinical Psychology Unit, Department of Psychology, University of  
Sheffield, Western Bank, Sheffield S10 2TN

**Investigating the use of writing for young people who are distressed by their skin condition: Consent  
to be contacted**

I would like to contact you about taking part in my research. Please fill this in and send it back to me if you agree to this. I will then post you some more information. If it is alright by you, it would be helpful if you could also give me your email address or phone number. That way, if I don't hear from you, I can contact you two weeks after I have sent the information out to make sure it has arrived. If you decide that you do not want to take part once you know more about it (or at any stage) that's ok! If you do want to take part then we can arrange a time to meet up.

Your name:



Your gender:

Your age:

Your address:

What skin condition do you have?

Your phone number and/or email address, so I can contact you (Please state which is easiest for you. If telephone would be easiest, what day/time is best for you?)



***I agree to be contacted by Lisa Newton about her research.***

Signature:

---

To be completed by your parent/guardian:

*I agree that Lisa Newton may contact my child about taking part in her research. I believe that my child will be able to write about something that matters to them. I agree to my child taking part in the research if he/she wants to.*

Signature:

Name of parent/guardian

Address and telephone number (if different from above)

*Thank you!*



## Appendix G: Full information pack for young people



Department Of Psychology.

### Clinical Psychology Unit.

Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training & consultancy  
Clinical Psychology Unit, Department of Psychology, University  
of Sheffield, Western Bank, Sheffield S10 2TN

### Research information sheet: Investigating the use of writing for young people who are distressed by their skin condition

Dear

Thank you for your reply. You are invited to take part in my research. This information sheet will tell you more about it. Please talk to me (or to other people) if you want to know more, to help you decide whether to take part.

#### What is the study about?

Some people feel that their skin condition can sometimes make it difficult to be with other people, or can make them feel sad, cross or nervous. I'm really interested in trying to find a way to help young people who feel like this. I want to know more about how people feel about themselves and their skin condition. I want to know what effects a short writing task might have.



#### Who is taking part?

Thirteen people who feel as though their skin condition can (sometimes) make it difficult to be around other people, or can (sometimes) make them feel bad about themselves. Everyone who takes part will be aged between 11 and 21.

Do I have to take part?

No! If you're not interested, that's ok. Nobody has to take part. If you do think you want to take part, you can still change your mind at any point without having to give a reason.

Who will know if I take part?

Any involvement you have in this research will be kept confidential. Your name will not be on anything that I write up from the research. If I am worried about anything you tell me (for example, if you seem very unhappy), I may ask to contact your consultant or parents about it. I will talk to you about this first.

What does it involve?

If you decide to take part, I would like to meet with you or talk to you on the telephone four times. Each of these times I will ask you to fill out some question sheets about how you feel. On one of these times I will ask you to write about something that matters to you. It's not a test and there are no right or wrong answers. Spelling and punctuation don't matter for this writing, and only I will read what you write. If you do not want to write about something that matters to you please do not offer to take part in this research.

I can meet you at the university or at your home or school (with the school's permission) if you would prefer. I would also like you to spend about five minutes a day keeping a record of how you feel, for six weeks. I would also like you (or your parent/guardian) to keep a record of any medical appointments you have over the months that you are involved in the study. Taking part won't affect your treatment, and won't restrict what you can do. I will give each person who takes part a £10 Amazon gift voucher to cover their expenses. If you like, I will also give you a summary of what I find out in my research. There are more details on the attached sheet.



What are the advantages and disadvantages of taking part?

We hope that you will find taking part in the study useful, but you might not. The

## Appendix G: Full information pack for young people, including consent form

research is designed to help us to know a bit more about what things *might* be useful for people who have difficulties because of their skin condition. You will not be given therapy as part of this study. The focus of the research is how you *feel*. Nothing we will do is designed to directly affect your skin condition.

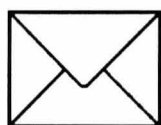
### What if I feel upset or worried?

We hope that taking part will be a positive experience. If you feel upset or worried then you can choose to quit at any point. You also don't have to answer any questions or complete anything if you don't want to. You can contact me using the details given, talk to your GP, or contact The Line (Sheffield Child Helpline) on 0800 279 7454.

### What if I want to complain about the research?

You can contact the project co-ordinator, Andrew Thompson: Clinical Psychology Unit, University of Sheffield, Western Bank, Sheffield, S10 2HP; (0114) 222 6637. If this doesn't sort it out then the normal NHS complaints procedure is available to you.

### How can I get more information?



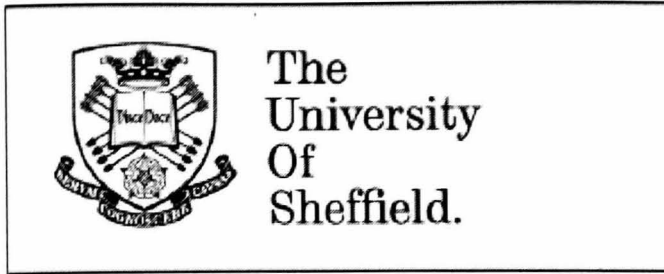
You can write to me (Lisa Newton) at Clinical Psychology Unit, University of Sheffield, Western Bank, Sheffield, S10 2HP, or you can leave a message asking me to contact you with the Research Support Officer, Christie Harrison, on 0114 2226650. Alternatively, you could email me at the following address: [emaillisanewton-research@yahoo.co.uk](mailto:emaillisanewton-research@yahoo.co.uk).



### What do I do if I want to be involved?

If you want to be involved then that's great! I will contact you as we agreed on the "consent to be contacted" form, so we can talk about it. We can then decide on a good time and place to meet.

*Thank you for your interest in my research and for reading this information sheet!*



Department Of Psychology.  
**Clinical Psychology Unit.**  
Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training & consultancy.  
Clinical Psychology Unit, Department of Psychology, University of Sheffield, Western Bank, Sheffield S10 2TN

**Consent form: Investigating the use of writing for young people**

**who are distressed by their skin condition**

Researcher: Lisa Newton, Trainee Clinical Psychologist, University of Sheffield

Participant Identification Number (I'll fill this bit out)

**Please write your initials in the box**

I have read and I understand the information sheet

I have had the opportunity to ask questions.



I understand that I can choose whether or not to take part

I understand that I am free to stop taking part at any time

I understand that if I take part, my involvement is confidential

I understand that data from some research is looked at by other people from the NHS trust. This is to make sure that research is well carried out. I agree to these people having access to data collected about me during this research.

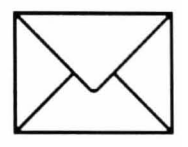
I agree to take part in the above research project.

Appendix G: Full information pack for young people, including consent form

\_\_\_\_\_  
Name of Participant                      Date                      Signature

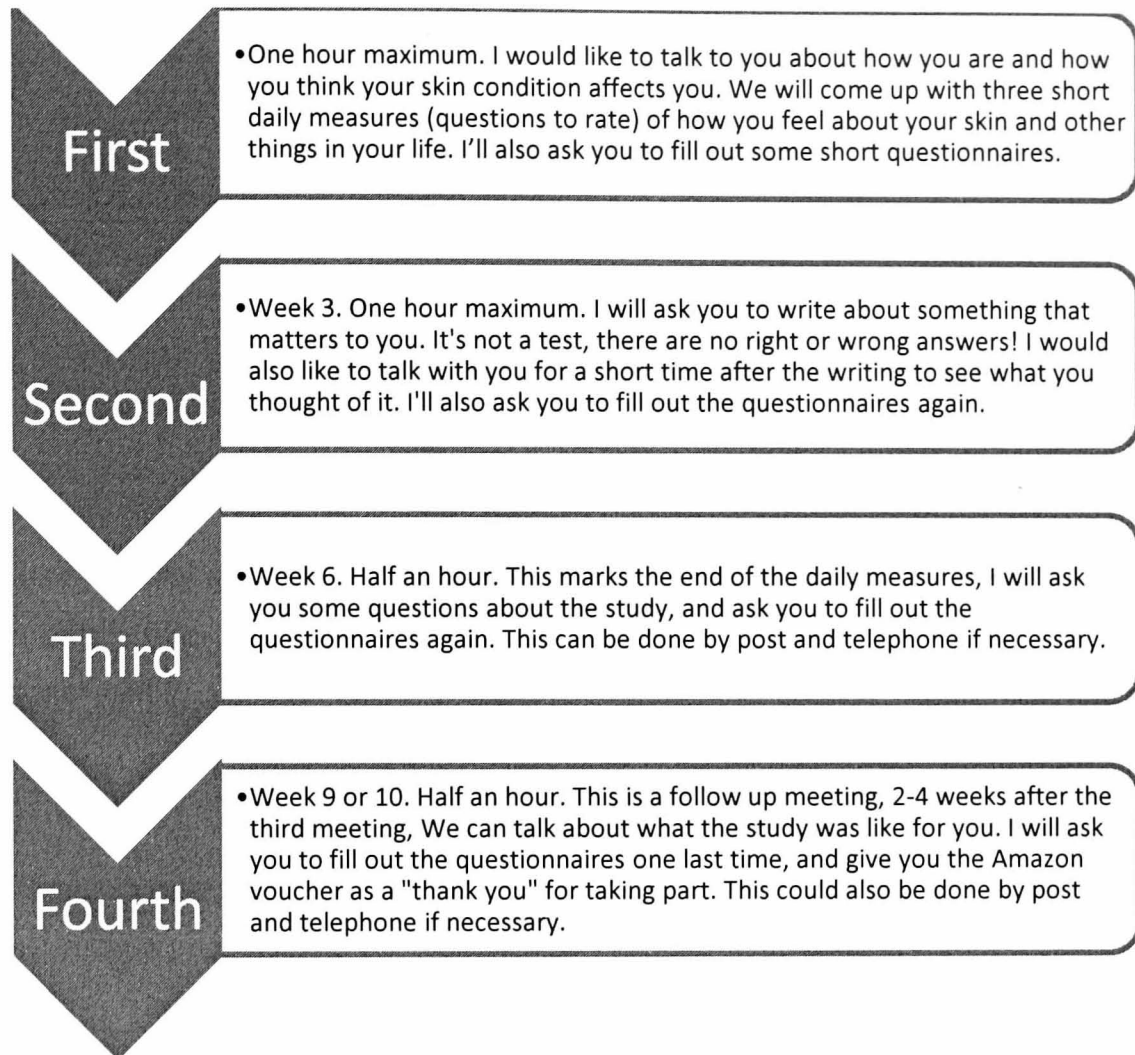
\_\_\_\_\_  
Lead Researcher                      Date                      Signature

If you did not want to put your phone or email details on the "consent to contact" form, please put a contact phone number or email address here:



## What the study involves

Answering the three daily questions we agree on in the first meeting. 2-3 minutes per day for 6 weeks.



## **Appendix H: Email sent to parents (recruitment method 2)**

### **Subject heading: Do you have a child aged 11 – 18?**

**Do they have a skin condition that can sometimes make them feel shy or awkward around other people, or can make them feel sad, cross or nervous?**

**If so, please read on!**

My name is Lisa Newton. I am doing some research with young people who feel bad about their skin condition as part of my training to be a Clinical Psychologist at Sheffield University. I am interested in trying to develop a way to help people feel better about themselves. Would your son or daughter be interested in taking part?

### **What does the study involve?**

The study involves a simple, quick psychological intervention that aims to help young people to cope with stresses associated with having a skin condition.

I will want to meet with your child up to four times. The meetings can take place at the university, at your home or at your child's school. On the first meeting, I will want to talk to your child about how they feel about their skin condition. On the basis of this talk, your child and I will decide on three things for your child to rate daily (for example, "I have felt uncomfortable being around others today") for six weeks. Your child and I will also complete some measures about how your child feels about themselves and their skin condition. On the second meeting (three weeks later) I will ask your child to write about something that matters to them. It's not a test; there are no right or wrong answers and spelling and punctuation will not matter for my research. The third meeting (three weeks after the second) and fourth meeting (four-six weeks later) are follow-up meetings, to find out whether there has been any change in how your child feels about themselves and their skin condition.

## Appendix H: Email sent to parents (recruitment method 2)

I hope that people who take part in my research will find it useful, but it might have no effect. All participants will receive a £10 Amazon gift voucher to cover their time and expenses.

### **What next?**

If your child might want to take part in this research, please reply to this email with your postal address. I will send out some information sheets and a consent form. If your child decides that they would like to take part, they can fill out the form and send it back. We can then arrange a first meeting. Either of you can still change your minds at any point without having to give a reason.

If you want to ask me some questions you can leave a message asking me to contact you with Christie Harrison (research support officer) on 0114 2226650. You could also email me at this address: [emaillisanewton-research@yahoo.co.uk](mailto:emaillisanewton-research@yahoo.co.uk), or [pcp06ldn@shef.ac.uk](mailto:pcp06ldn@shef.ac.uk).

Thank you for reading this email!

Yours faithfully,

Dr Lisa Newton



## **Appendix I: Email sent to students (recruitment method 3)**

### **Subject heading: Does your skin upset you?**

**Are you aged 17-21?**

**Do you have a skin condition that can sometimes make you feel shy or awkward around other people, or can make you feel sad, cross or nervous?**

**If so, please read on!**

My name is Lisa Newton. I am doing some research with people who feel bad about their skin condition as part of my training to be a Clinical Psychologist at Sheffield University. I am interested in trying to develop a way to help people feel better about themselves. Would you be interested in taking part?

### **What does the study involve?**

The study involves a simple, quick psychological intervention that aims to help people to cope with stresses associated with having a skin condition.

I will want to meet with you up to four times. The meetings can take place at the university or at your home. On the first meeting, I will want to talk to you about how you feel about your skin condition. On the basis of this talk, we will decide on three things for you to rate daily (for example, "I have felt uncomfortable being around others today") for six weeks. I will also ask you to complete some measures about how you feels about yourself and your skin condition. On the second meeting (three weeks later) I will ask you to write about something that matters to you. It's not a test; there are no right or wrong answers and spelling and punctuation will not matter for my

Appendix I: Email sent to students (recruitment method 3) research. The third meeting (three weeks after the second) and fourth meeting (four-six weeks later) are follow-up meetings, to find out whether there has been any change in how you feel about yourself and your skin condition.

I hope that people who take part in my research will find it useful, but it might have no effect. All participants will receive a £10 Amazon gift voucher to cover their time and expenses.

### **What next?**

If you want to take part in this research, please reply to this email with your postal address. I will send out some information sheets and a consent form. If you decide that you would like to take part, you can either fill out the form and send it back, or email me so that we can arrange a first meeting. You can still change your mind at any point without having to give a reason.

If you want to ask me some questions you can leave a message asking me to contact you with Christie Harrison (research support officer) on 0114 2226650. You could also email me at this address: [emaillisanewton-research@yahoo.co.uk](mailto:emaillisanewton-research@yahoo.co.uk), or [pcp06ldn@shef.ac.uk](mailto:pcp06ldn@shef.ac.uk).

Thank you for reading this email!

Yours faithfully,

Dr Lisa Newton

## Appendix J: Participant pack for student participants



Department Of Psychology.  
**Clinical Psychology Unit.**  
Doctor of Clinical Psychology (DClin Psy) Programme  
Clinical supervision training and NHS research training & consultancy.  
Clinical Psychology Unit, Department of Psychology,  
University of Sheffield, Western Bank, Sheffield S10 2TN

### **Research information sheet: Investigating the use of writing for young people who are distressed by their skin condition**

Dear

Thank you for your reply. You are invited to take part in my research. This information sheet will tell you more about it. Please talk to me (or to other people) if you want to know more, to help you decide whether to take part.

#### What is the study about?

Some people feel that their skin condition can sometimes make it difficult to be with other people, or can make them feel sad, cross or nervous. I'm really interested in trying to find a way to help people who feel like this. I want to know more about how people feel about themselves and their skin condition. I want to know what effects a short writing task might have.

#### Who is taking part?

Thirteen people who feel as though their skin condition can make it difficult to be around other people, or can make them feel bad about themselves. Everyone who takes part will be aged between 11 and 21.



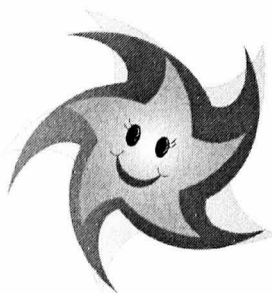
### Do I have to take part?

No! If you're not interested, that's ok. Nobody has to take part. If you do think you want to take part, you can still change your mind at any point without having to give a reason.

### Who will know if I take part?

Any involvement you have in this research will be kept confidential. Your name will not be on anything that I write up from the research. If I am worried about anything you tell me (for example, if you seem very unhappy), I may ask to contact your GP about it. I will talk to you about this first.

### What does it involve?



If you decide to take part, I would like to meet with you up to four times (the last two meetings can be done by telephone and post if necessary). On one of these meetings I will ask you to write about something that matters to you. It's not a test and there are no right or wrong answers. Only I will read what you write. If you do not want to write about something that matters to you please do not offer to take part in this research.

I can meet you at the university or at your home if you would prefer. In the first meeting we will agree three questions that are relevant to how your skin affects you. I would like you to spend two or three minutes a day answering these questions, for six weeks. I would also like you to keep a record of any medical appointments you have over the months that you are involved in the study. Taking part won't affect your treatment, and won't restrict what you can do. I will give each person who takes part a £10 Amazon gift voucher to cover their expenses. If you like, I will also give you a summary of what I find out in my research. There are more details on the attached sheet.

### What are the advantages and disadvantages of taking part?

We hope that you will find taking part in the study useful, but you might not. The research is designed to help us to know a bit more about what things *might* be useful

for people who have difficulties because of their skin condition. You will not be given therapy as part of this study. The focus of the research is how you *feel*. Nothing we will do is designed to directly affect your skin condition.

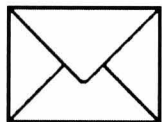
### What if I feel upset or worried?

We hope that taking part will be a positive experience. If you feel upset or worried then you can choose to quit at any point. You also don't have to answer any questions or complete anything if you don't want to. You can contact me using the details given, talk to your GP, or contact The Samaritans on 08457 909090 or Nightline on (0114) 222 8787.

### What if I want to complain about the research?

You can contact the project co-ordinator, Andrew Thompson: Clinical Psychology Unit, University of Sheffield, Western Bank, Sheffield, S10 2HP; (0114) 222 6637. If this doesn't sort it out then the normal NHS complaints procedure is available to you.

### How can I get more information?



You can write to me (Lisa Newton) at Clinical Psychology Unit, University of Sheffield, Western Bank, Sheffield, S10 2HP, or you can leave a message asking me to contact you with the Research Support Officer, Christie Harrison, on 0114 2226650. Alternatively, you could email me at the following address: [emallisanewton-research@yahoo.co.uk](mailto:emallisanewton-research@yahoo.co.uk).



### What do I do if I want to be involved?

If you want to be involved then that's great! Please fill out the sheets (BDI-II, BAI and consent form) that I have sent you, and send them back to me. If you do not want to be involved, please send me back the (blank) BDI-II and BAI sheets anyway so that I can use them with someone else. If you do agree to take part, I will phone you so that we can decide on a good time and place to meet.

***Thank you for your interest in my research and for reading this information sheet!***

## **Appendix K: Prompt list of sample repeated measures statements**

### Possible questions...

I have felt scared to be around people today

My skin has upset me today

I have been able to talk to people without worrying about what they think of my skin

I have been able to do sports today without worrying about my skin

My skin has made me feel awkward today

I have thought about my skin today

I have avoided doing things I enjoy because of my skin today

I have checked my appearance today

I have tried to hide my skin today

I have felt confident today

I have felt sad about my skin today

I have felt shy because of my skin today

I have felt ok about my skin today

Appendix L: Prompt list of sample repeated measures statements

Not at all	A little	Somewhat	A lot	Extremely
Not at all	A little	Some of the time	Most of the time	All of the time

Additional prompts:

sad, happy, shy, scared, awkward, fed up, annoyed, angry, confident, preoccupied,

avoided things, enjoyed things, did things anyway, did things without worrying,  
worried, checking, hiding

## **Appendix L: Self-affirmation intervention**

The following is a list of values that some people find important to them. Please read the list carefully and think about each value. Then circle the value that is the most important to you. If a value that is important to you is not here then you can add it. If you find it hard to choose just one value you can choose up to three.

**Being good at (a) sport(s)**

**Being good at art**

**Being clever and/or getting good grades**

**Being creative**

**Being independent**

**Living in the moment**

**Being a member of a club or social group**

**Being good at or interested in music**

**Having political values**

**Having good relationships with friends or family**

**Having religious values**

**Having a sense of humour**





Now please circle the words to show how much you agree with the following statements:

This value has influenced my life:

Very strongly disagree	Disagree a lot	Disagree a little	Agree a little	Agree a lot	Very strongly agree
---------------------------	-------------------	----------------------	-------------------	----------------	------------------------

In general, I try to live up to this value:

Very strongly disagree	Disagree a lot	Disagree a little	Agree a little	Agree a lot	Very strongly agree
---------------------------	-------------------	----------------------	-------------------	----------------	------------------------

This value is an important part of who I am:

Very strongly disagree	Disagree a lot	Disagree a little	Agree a little	Agree a lot	Very strongly agree
---------------------------	-------------------	----------------------	-------------------	----------------	------------------------

I care about this value:

Very strongly disagree	Disagree a lot	Disagree a little	Agree a little	Agree a lot	Very strongly agree
---------------------------	-------------------	----------------------	-------------------	----------------	------------------------

## Appendix M: Guidelines for Exit Interview

- What was the study like for you?
  - Did it seem helpful?
    - If so, how? If not, why not?
- Do you think things improved or got worse for you during the study, or stayed the same?
  - If things changed, what changed?
  - Why do you think it changed?
- What did you think of the writing task?
  - Do you think it had an effect on the kinds of things you thought about afterwards?
  - The purpose of the writing task was to help you to think about things that are important to you, and the things that you do that matter to you. This has been helpful for some people to help them to feel more able to cope with threats (such as thinking people are looking at or judging you). It has been helpful for other people by reminding them of things that they could do more of in the future.
    - Did it help you? If so, how?
- What was it like to talk to me about your skin and how it affects you?
  - Did that seem helpful? Difficult?
- What was it like to rate the three questions every day for 6 weeks?
  - Do you think it had an effect on how you felt or what sorts of things you thought about?
- What did you think of the printed out measures (the ones that I've asked you to do each time I've seen you)?
  - Did they seem helpful?
  - What was it like to fill them out?

#### Appendix M: Guidelines for exit interview

- Of each of the four parts of the study (keeping daily measures, talking to me, the writing task, and the question sheets that you filled out every time you saw me):
  - which were the most helpful?
  - Least helpful?
  - Why?
  - Do you think others would find the same things helpful/unhelpful?
  
- Would you change anything about the study? What didn't you like doing?
- Anything else that you want to say about the study?

## Appendix N: Templates for baseline interview

### Initial template:

#### Effects of skin condition

1. Behavioural
  - a. Checking behaviours
  - b. Hiding/avoidance behaviours (Kent, 2002)
  - c. Restrictions
2. Psychosocial
  - a. Confidence
  - b. Fear of negative evaluations(Leary, Rapp, Herbst, Exum, and Feldman, 1998)
  - c. Preoccupation

Initial template was applied to the full dataset. It was modified as shown below.

### Final template:

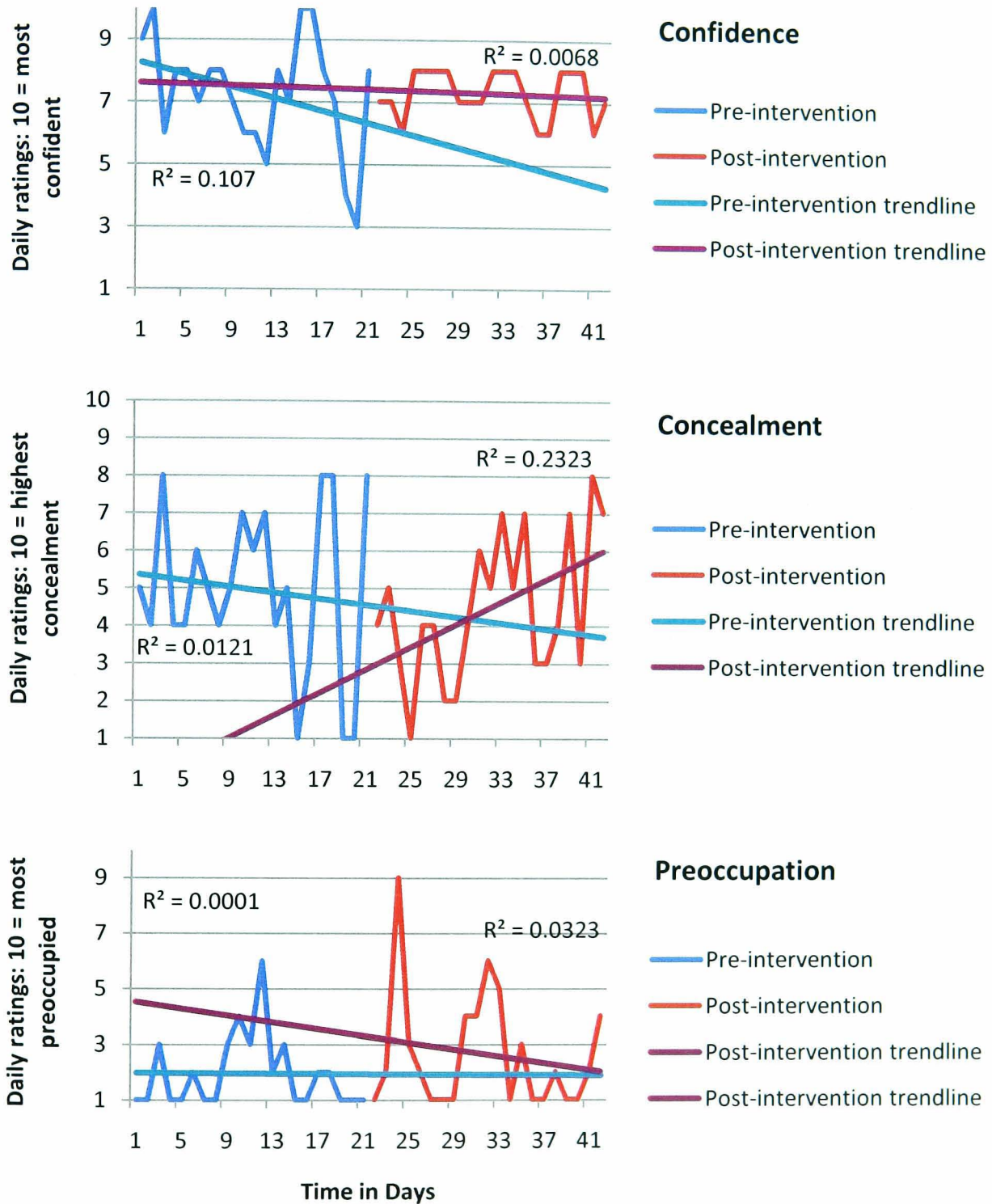
#### Effects of skin condition

1. Avoidance and concealment
  - a. Restrictions
  - b. Concealment
    - i. Repercussions of concealment
2. Distress
  - a. Effects on confidence
3. Fear of negative evaluations
  - a. preoccupation
  - b. checking behaviours
  - c. lack of understanding from others
    - i. G.P. Issues
    - ii. Decisions about who to trust
  - d. Positive aspects and acceptance

## Appendix O: Individual daily repeated measures results

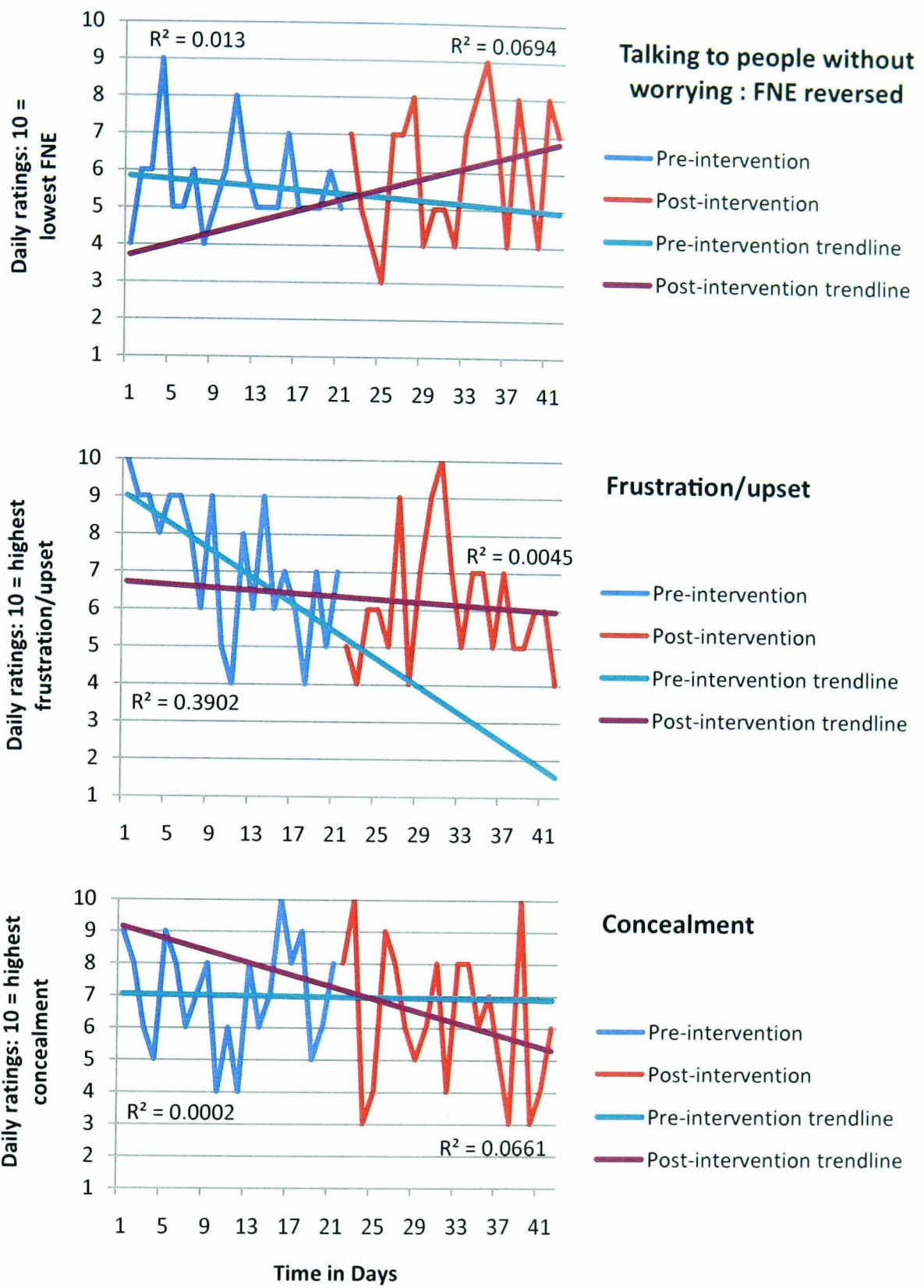
The variance explained by each trendline is provided by the  $R^2$  values: pre-intervention trendline  $R^2$  values are to the left; post-intervention trendline  $R^2$  values are to the right.

### Participant 1



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	p value
Confidence	7.29 $\pm$ 1.85	7.29 $\pm$ 0.78	209.00	0.76
Concealment	4.95 $\pm$ 2.27	4.48 $\pm$ 1.84	184.00	0.35
Preoccupation	1.95 $\pm$ 1.32	2.62 $\pm$ 2.10	185.5	0.35

Participant 2

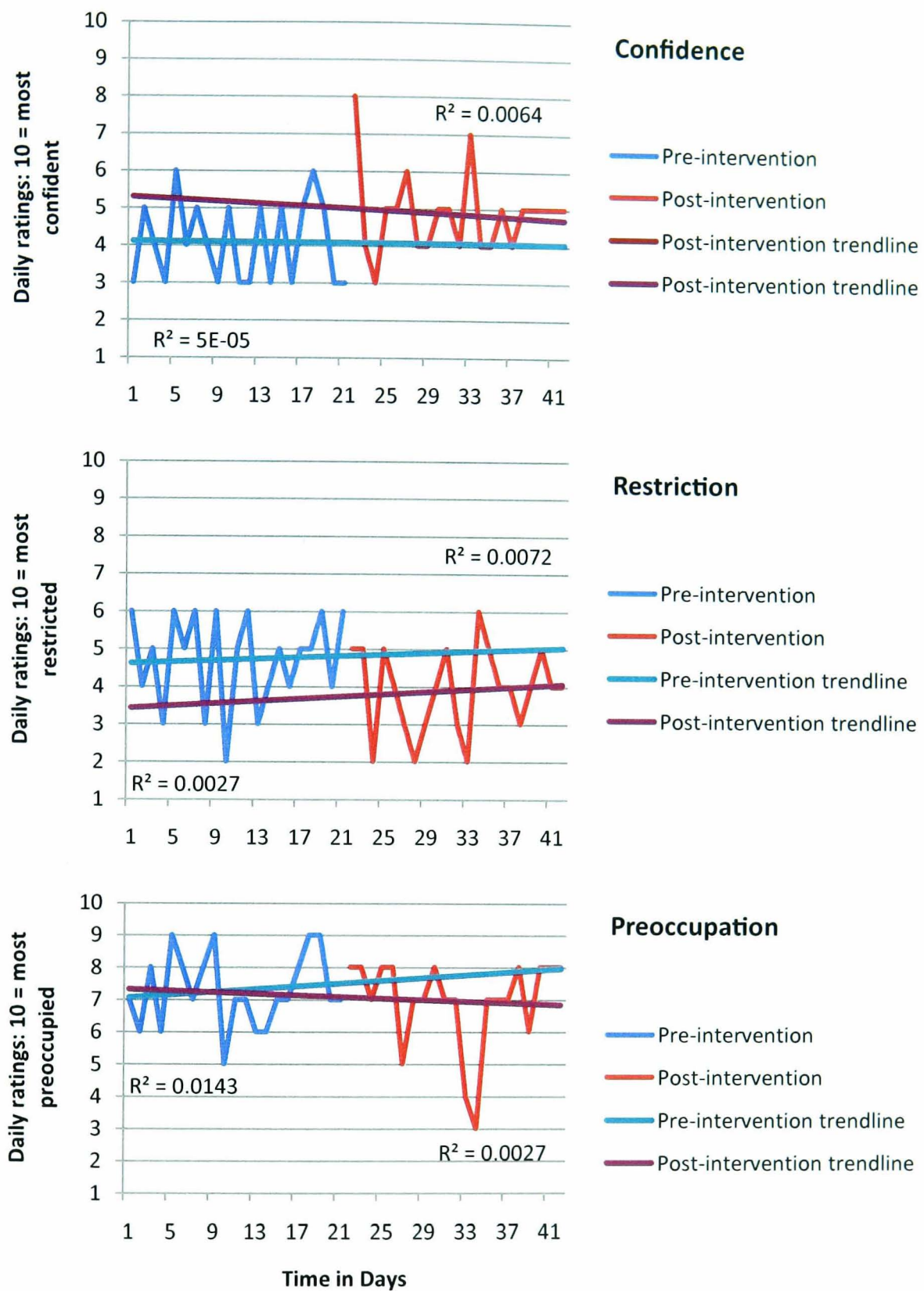


	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	p value
Lack of FNE	5.62 $\pm$ 1.20	6.05 $\pm$ 1.77	190.5	0.44
Frustration/upset	7.19 $\pm$ 1.81	6.14 $\pm$ 1.68	147.0	0.06
Concealment	7.00 $\pm$ 1.70	6.23 $\pm$ 2.26	174.5	0.24



Appendix O: Individual daily repeated measures results

Participant 3

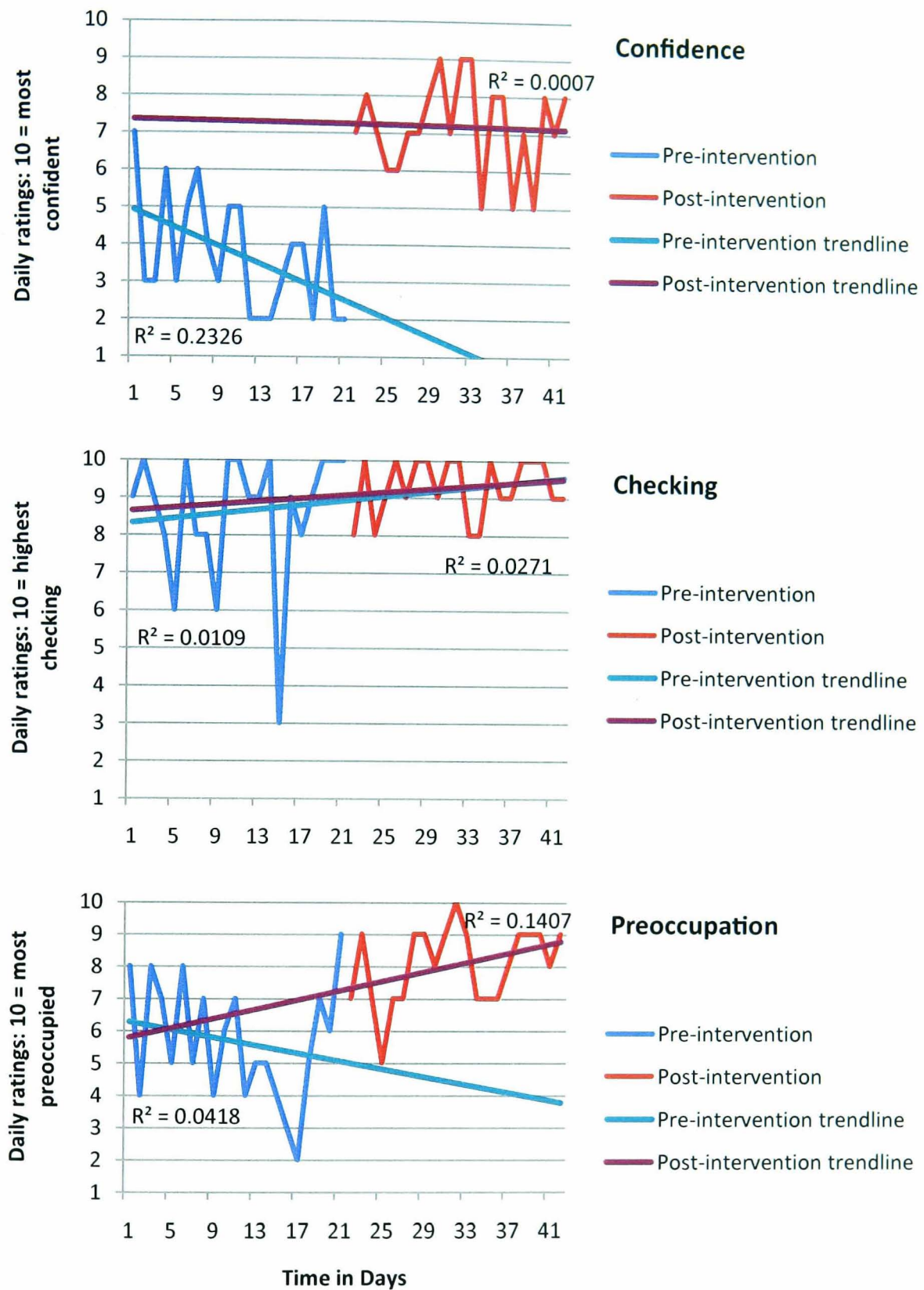


	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	p value
Confidence	4.01 $\pm$ 1.09	4.56 $\pm$ 1.11	146.0	<0.05
Restriction	4.71 $\pm$ 1.23	3.90 $\pm$ 1.13	137.0	<0.05
Preoccupation	7.29 $\pm$ 1.15	6.95 $\pm$ 1.40	210.5	0.79



Appendix O: Individual daily repeated measures results

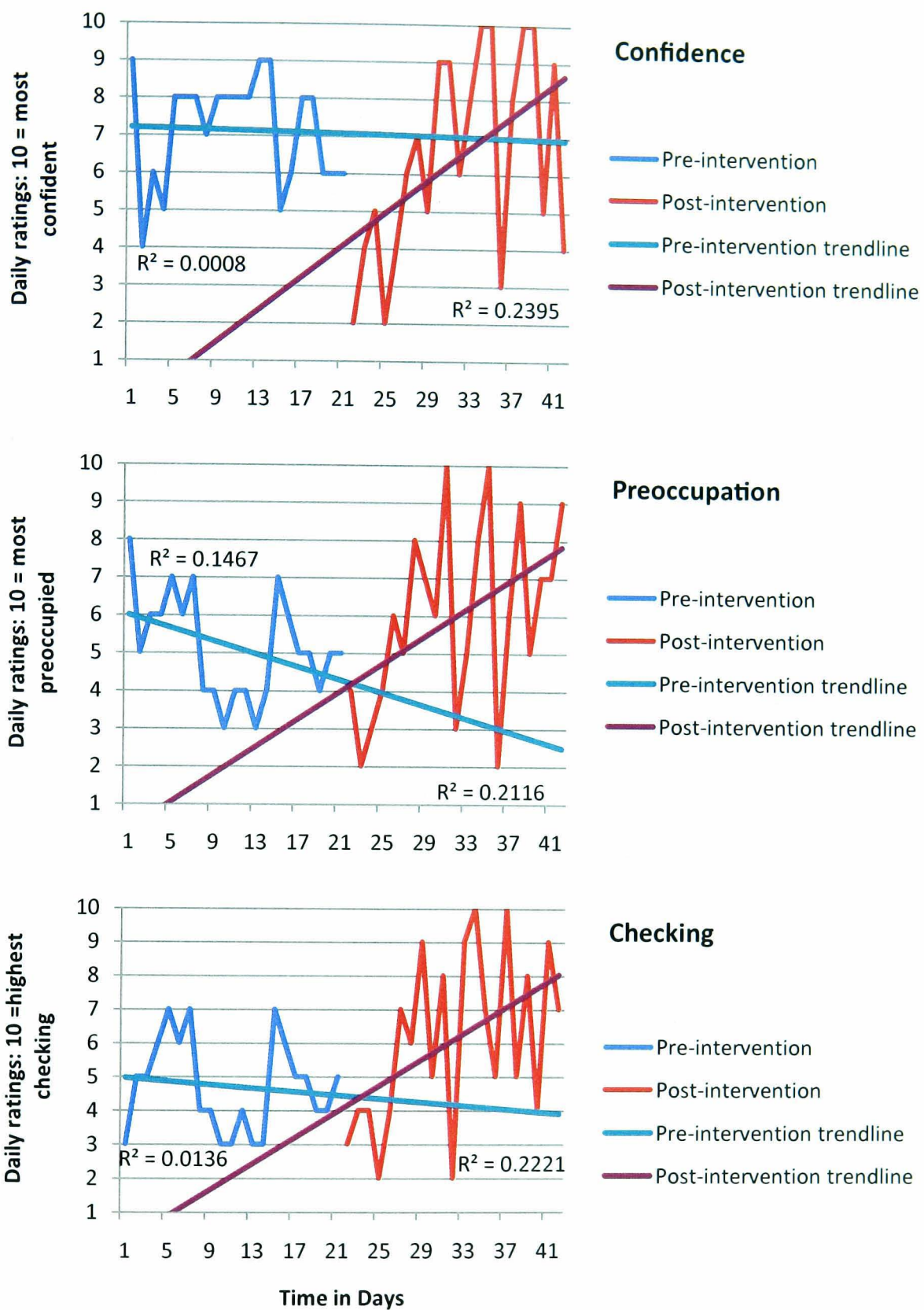
Participant 4



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	$p$ value
Confidence	3.71 $\pm$ 1.55	8.05 $\pm$ 1.20	8.5	<0.001
Checking	8.62 $\pm$ 1.77	9.29 $\pm$ 0.78	181.0	0.29
Preoccupation	5.67 $\pm$ 1.85	7.19 $\pm$ 1.25	114.0	<0.01

Appendix O: Individual daily repeated measures results

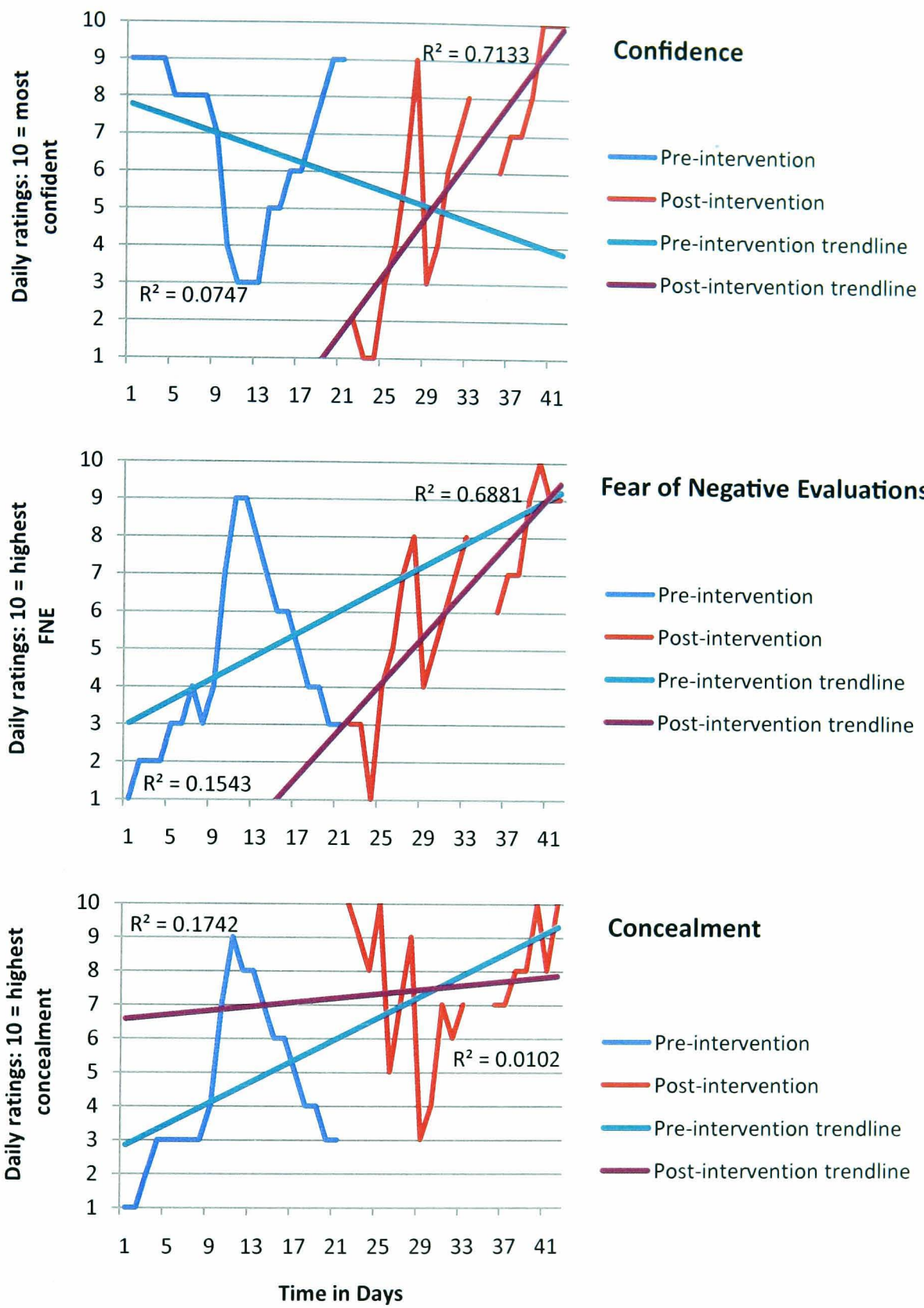
Participant 5



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	p value
Confidence	7.14 $\pm$ 1.46	6.47 $\pm$ 2.75	196.5	0.54
Preoccupation	5.14 $\pm$ 1.39	6.00 $\pm$ 2.47	172.0	0.22
Checking	4.71 $\pm$ 1.38	6.10 $\pm$ 2.55	149.0	0.07

Appendix O: Individual daily repeated measures results

Participant 6

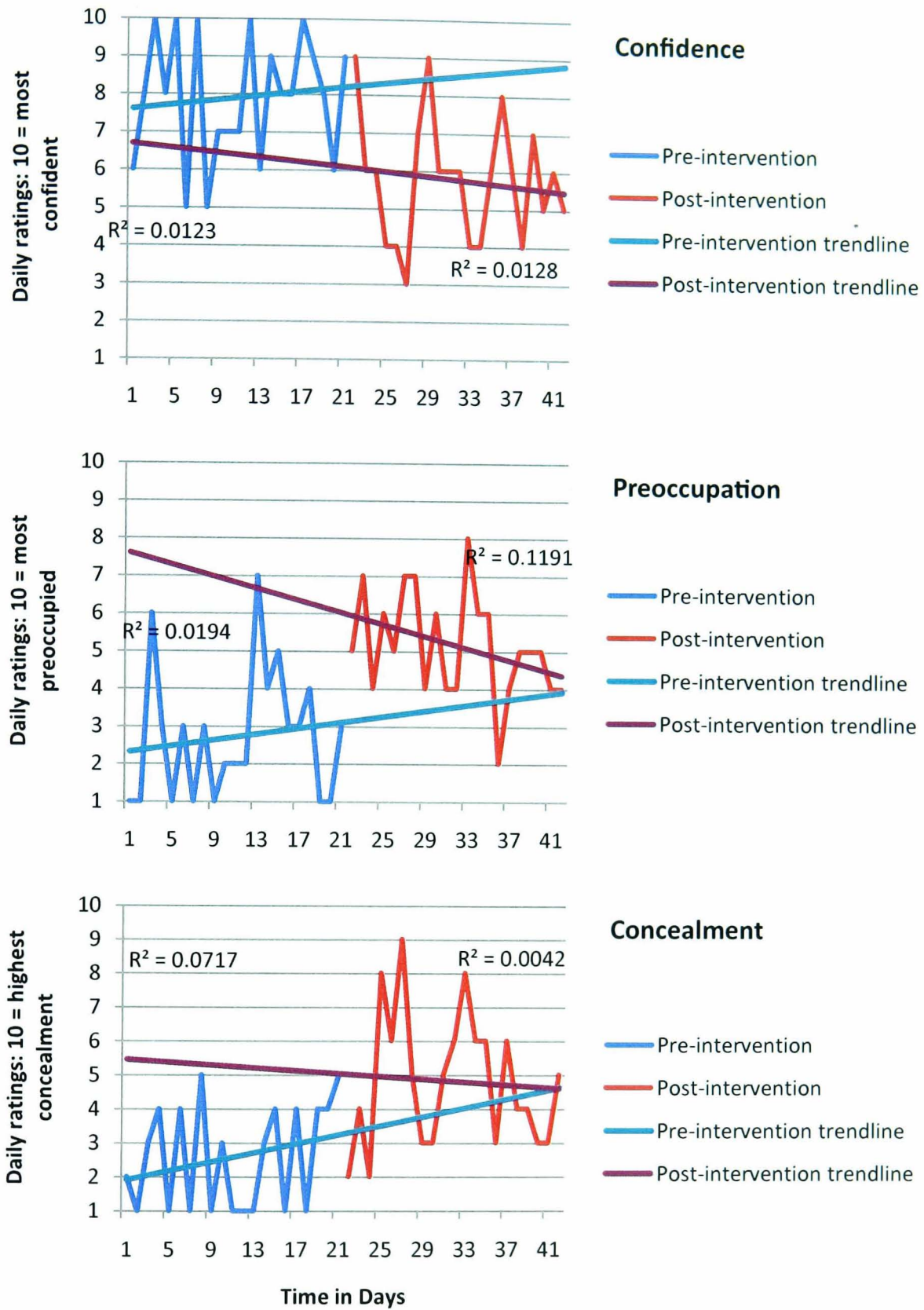


	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	p value
Confidence	6.81 $\pm$ 2.18	5.89 $\pm$ 2.98	164.0	0.35
FNE	4.52 $\pm$ 2.38	6.21 $\pm$ 2.44	120.5	<0.05
Concealment	4.43 $\pm$ 2.34	7.53 $\pm$ 2.01	66.5	<0.001



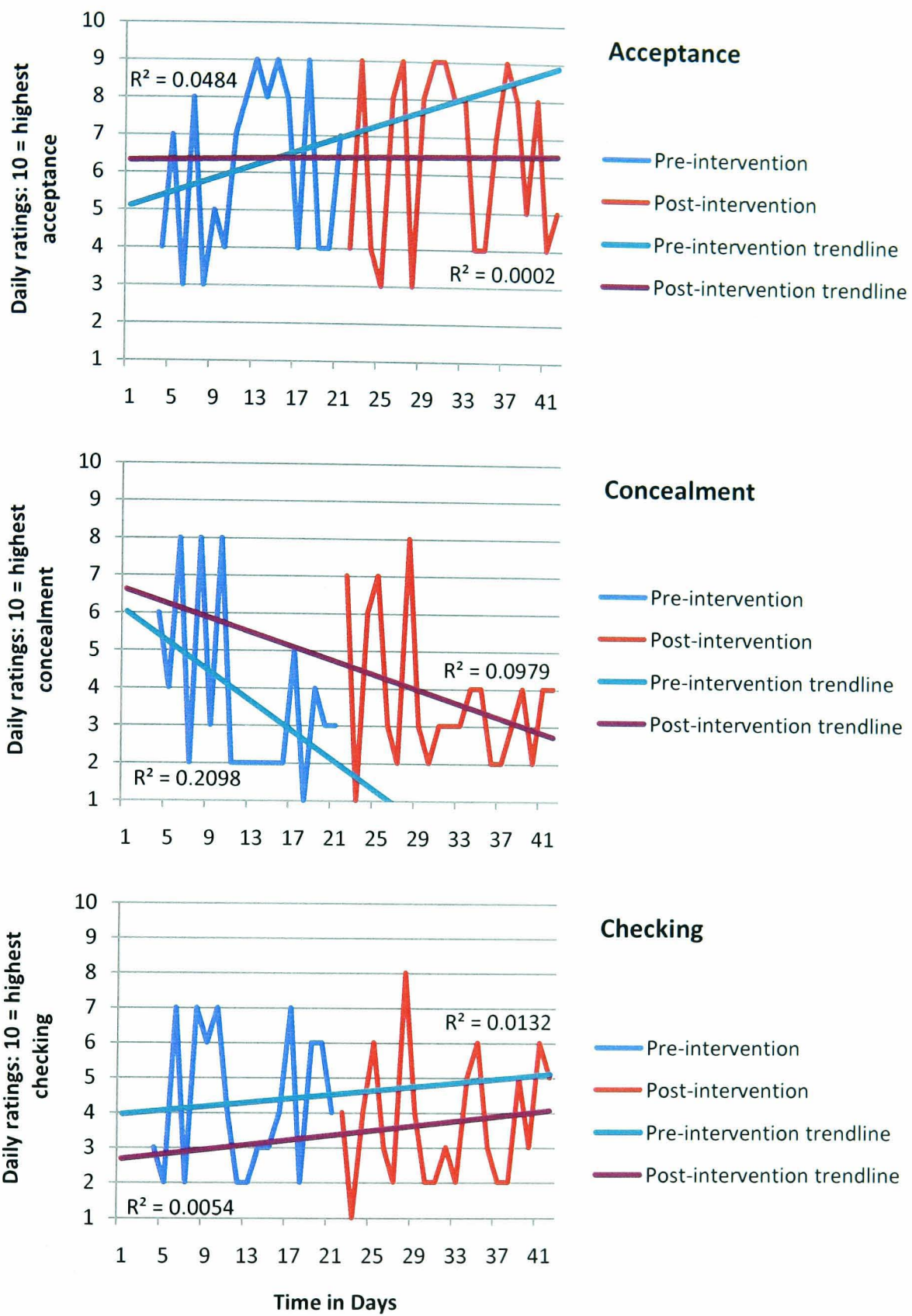
Appendix O: Individual daily repeated measures results

Participant 7



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	$p$ value
Confidence	7.91 $\pm$ 1.67	5.76 $\pm$ 1.64	82.5	<0.001
Preoccupation	2.71 $\pm$ 1.73	4.81 $\pm$ 1.64	60.5	<0.001
Concealment	2.57 $\pm$ 1.54	4.81 $\pm$ 1.99	88.5	<0.01

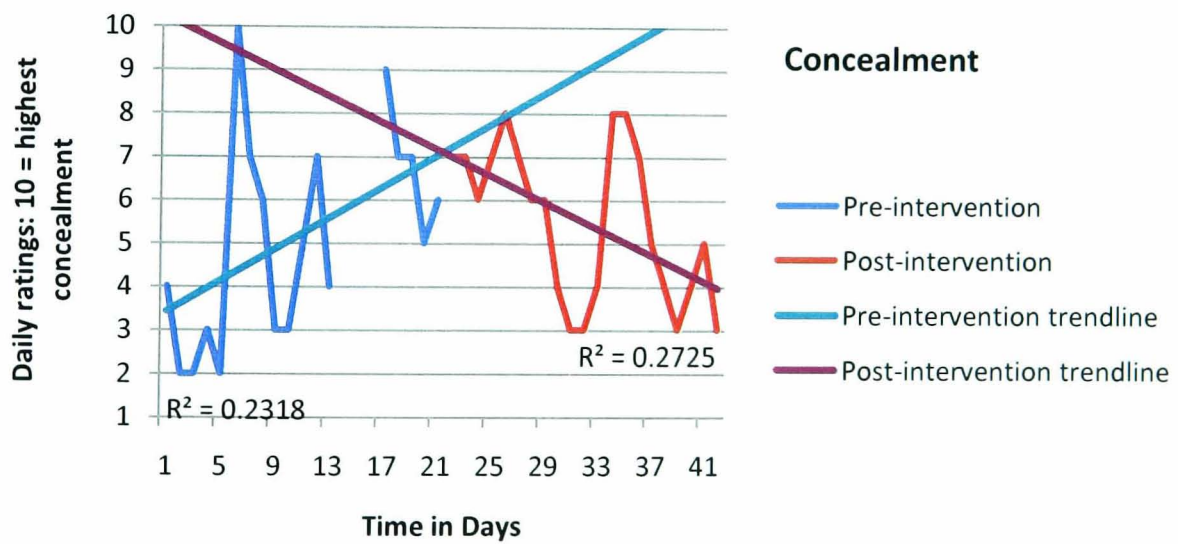
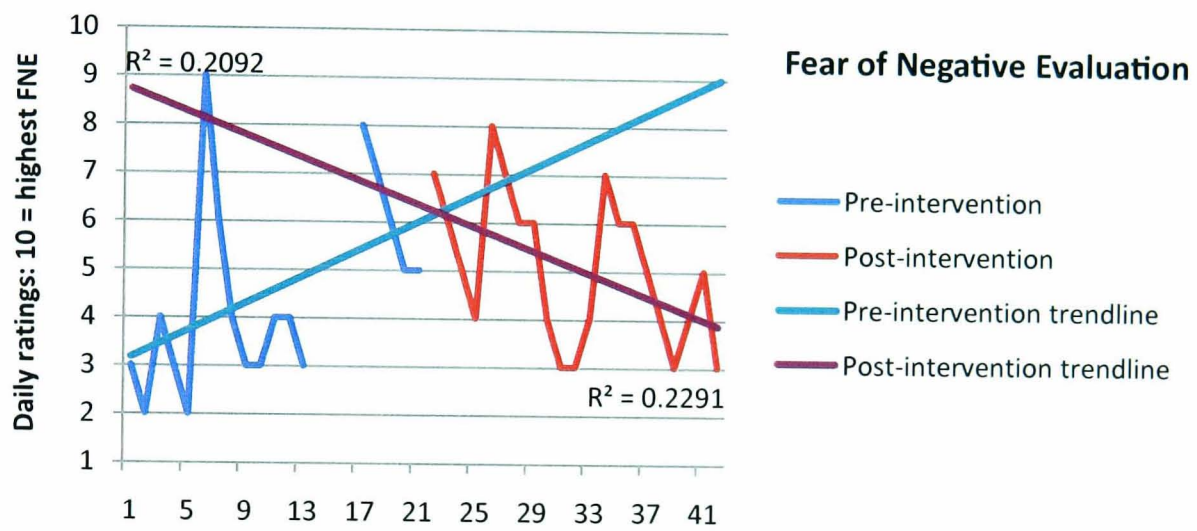
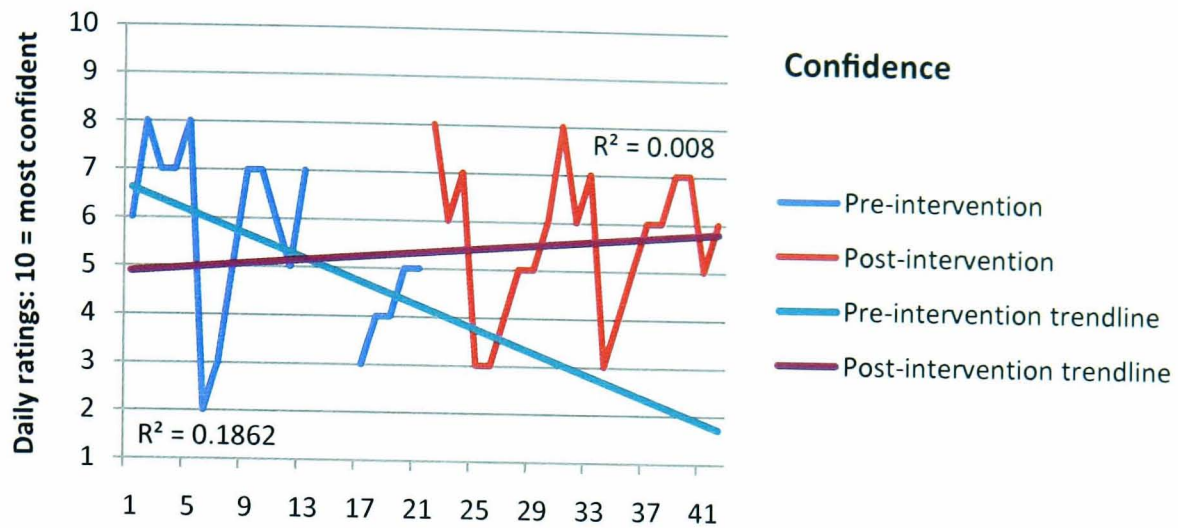
Participant 8



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st.dev.	Mann Whitney U	p value
Acceptance	6.17 $\pm$ 2.22	6.48 $\pm$ 2.29	168.5	0.57
Concealment	3.72 $\pm$ 2.32	3.67 $\pm$ 1.88	177.0	0.75
Checking	4.28 $\pm$ 2.02	3.71 $\pm$ 1.82	158.0	0.39

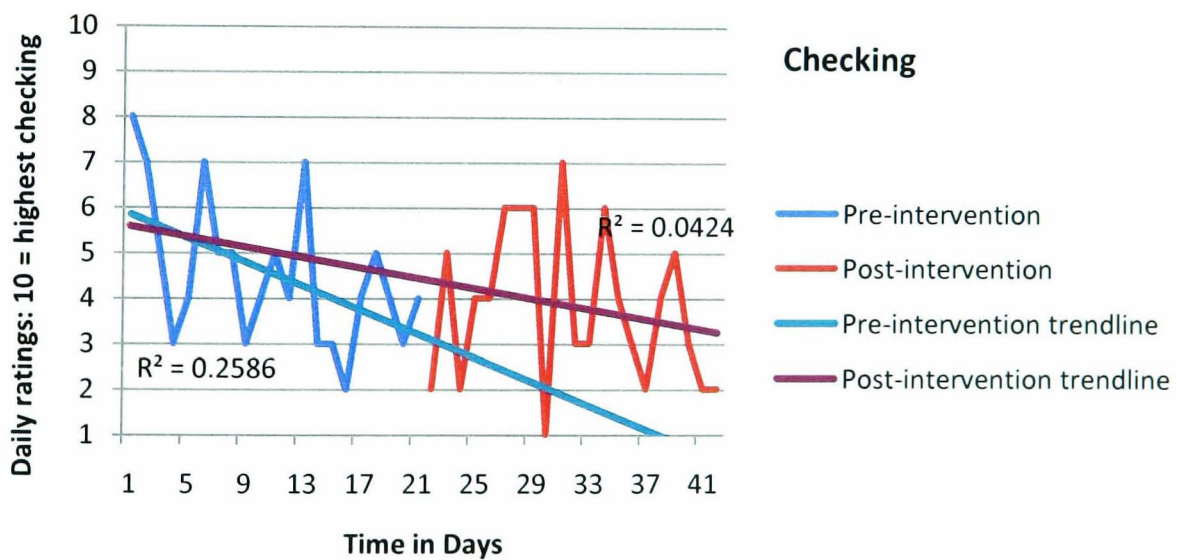
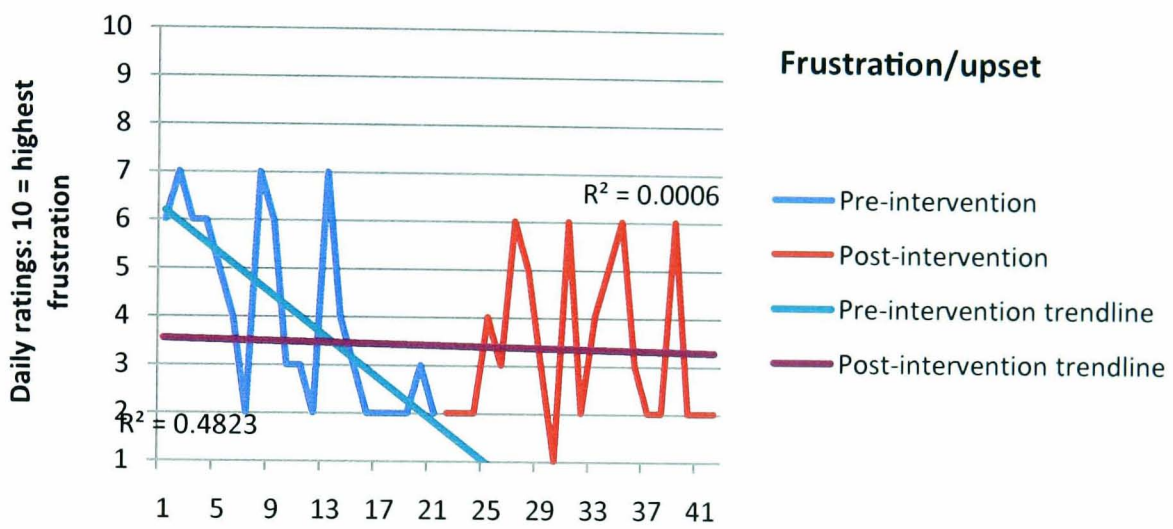
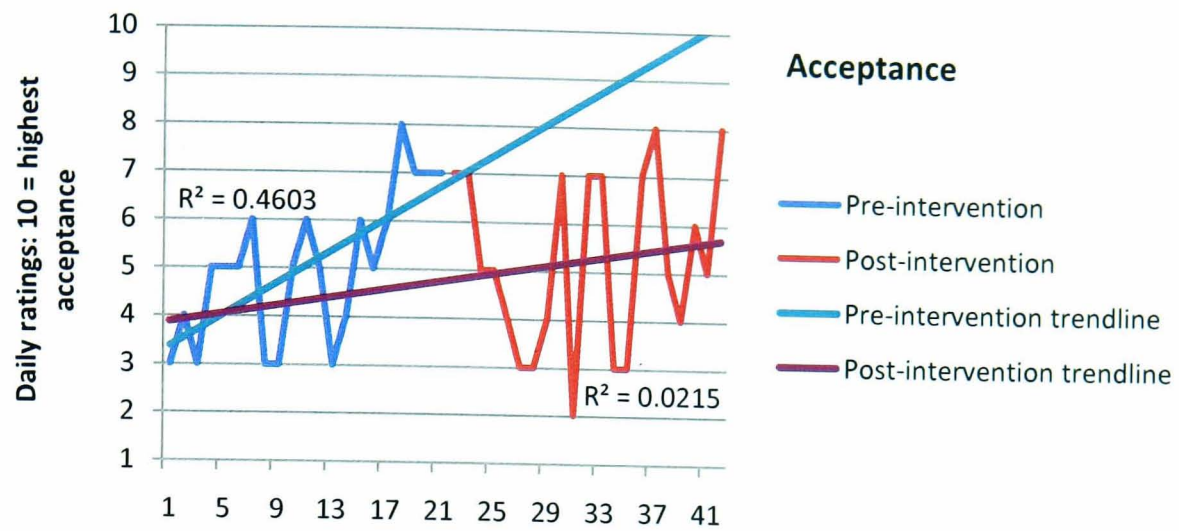


Participant 9



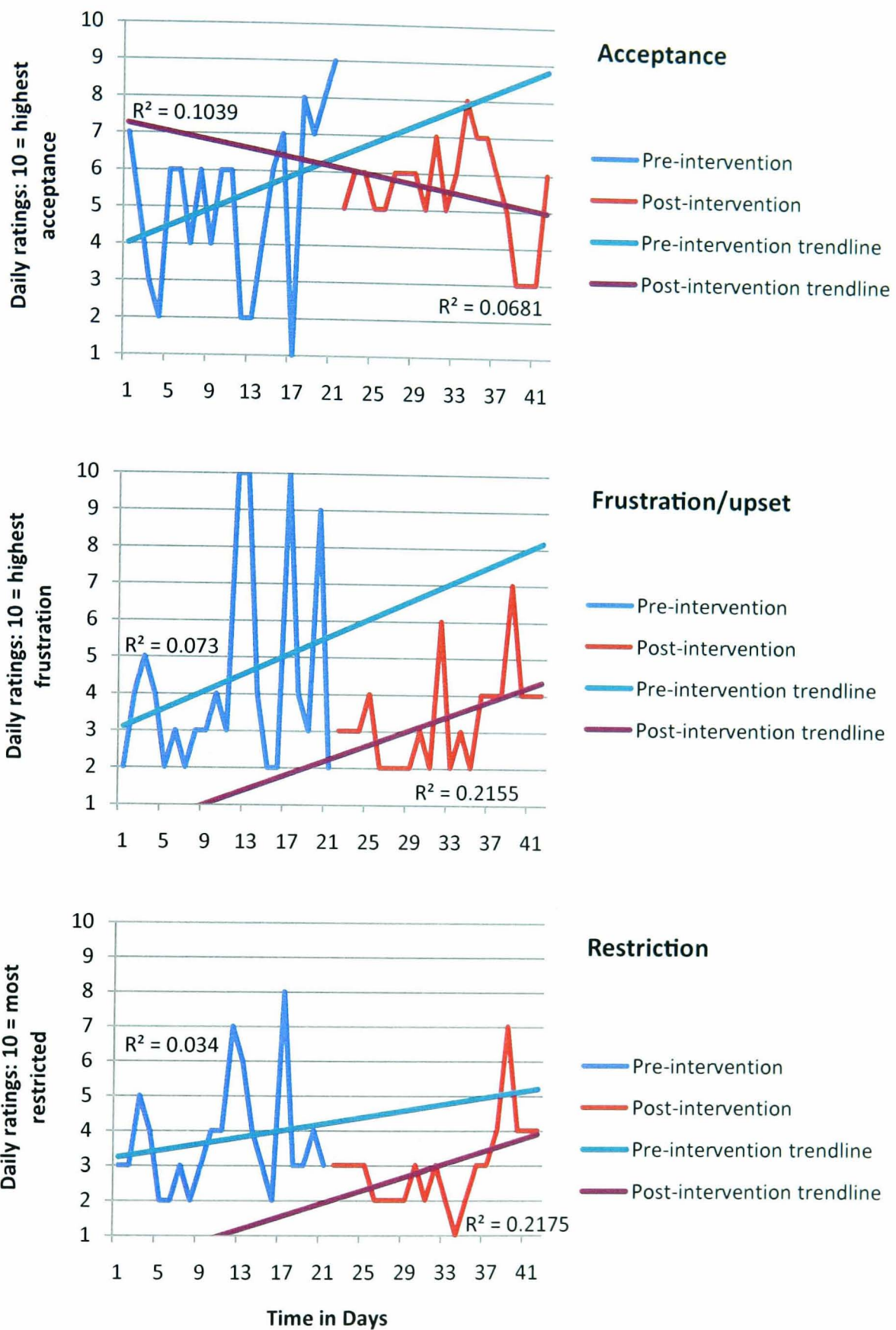
	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st.dev.	Mann Whitney U	$p$ value
Confidence	5.50 $\pm$ 1.79	5.57 $\pm$ 1.53	188.0	0.98
FNE	4.50 $\pm$ 2.01	5.04 $\pm$ 1.53	146.0	0.22
Concealment	5.11 $\pm$ 2.42	5.48 $\pm$ 1.81	163.0	0.46

Participant 10



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	<i>p</i> value
Acceptance	5.05 $\pm$ 1.53	5.24 $\pm$ 1.87	206.0	0.71
Frustration/upset	4.00 $\pm$ 1.94	3.33 $\pm$ 1.68	173.5	0.22
Checking	4.52 $\pm$ 1.60	3.81 $\pm$ 1.72	168.0	0.18

Participant 11



	Baseline mean $\pm$ st.dev.	Post-intervention mean $\pm$ st. dev.	Mann Whitney U	p value
Acceptance	5.19 $\pm$ 2.25	5.52 $\pm$ 1.33	212.0	0.83
Frustration/upset	4.33 $\pm$ 2.83	3.33 $\pm$ 1.35	192.0	0.46
Restriction	3.71 $\pm$ 1.62	2.96 $\pm$ 1.24	155.5	0.09



## Appendix P: Templates for exit interview

### Initial template

1. Effects of participating in the study:
  - a. Change in awareness
    - i. Of values
    - ii. Of skin related behaviour (e.g. avoidance)
    - iii. Of skin-related problems
    - iv. Of psychosocial difficulties
  - b. Change in behaviour
    - i. In values-related behaviour
    - ii. In skin-related behaviour (e.g. avoidance)
    - iii. In psychosocial behaviour/interpretations (e.g. re-appraisal of threats)
  - c. Other effects
2. Experience/evaluation of participating in the study
  - a. Impact of the self-affirmation task
    - i. General impact
    - ii. Face validity of task
  - b. Impact of talking about skin problem
  - c. Impact of daily diaries
  - d. Impact of nomothetic measures
  - e. Unhelpful or ineffective aspects of the research

### Final template

1. Effects of self-affirmation intervention
  - a. Values-related changes
    - i. Awareness of values
    - ii. Changes in values-based living
  - b. Changes in ability to deal with skin-related threats
  - c. Face validity of the self-affirmation task
2. Other effects of participation in the study (may be due to intervention or other processes)
  - a. Increased awareness
    - i. Of avoidance and concealment
    - ii. Of other skin-related experiences
    - iii. Changes in actions due to increased awareness
  - b. Feeling heard
    - i. Changes in actions due to feeling heard
  - c. Changes in relationship with skin condition
    - i. Reduced FNE
    - ii. Reduced concealment
    - iii. Increased openness
    - iv. No changes
3. Experience/evaluation of participating in the study
  - a. Relative impacts of the four aspects of the study