

Perceived Stress and Skin Picking Symptoms: The indirect effect of emotion regulation difficulties

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INTRO

- Difficulties in emotion regulation (DER) refers to an individual's ability to understand and control negative emotions and impulsive behaviors¹.
- DER has been linked to increased perceived stress and skin picking disorder symptom severity^{2,3}.
- Research in dermatological samples has found that skin picking is positively associated with emotional distress⁴.
- DER and higher perceived stress have been associated with increased levels of emotion disturbances².
- Hypothesis: Difficulties in emotion regulation would mediate the relationship between perceived stress and skin picking symptoms in those with eczema.

METHODS

- Adults who endorsed current (in the past four weeks) symptoms of eczema (including atopic dermatitis; $n = 126$) completed self-report questionnaires assessing severity of skin picking (SPS-R), difficulties in regulating emotion (DERS), and current levels of perceived stress (PSS).
- This sample identified as 67.5% White and 57.9% female, with a mean age of 32.81 ($SD = 10.55$).

RESULTS

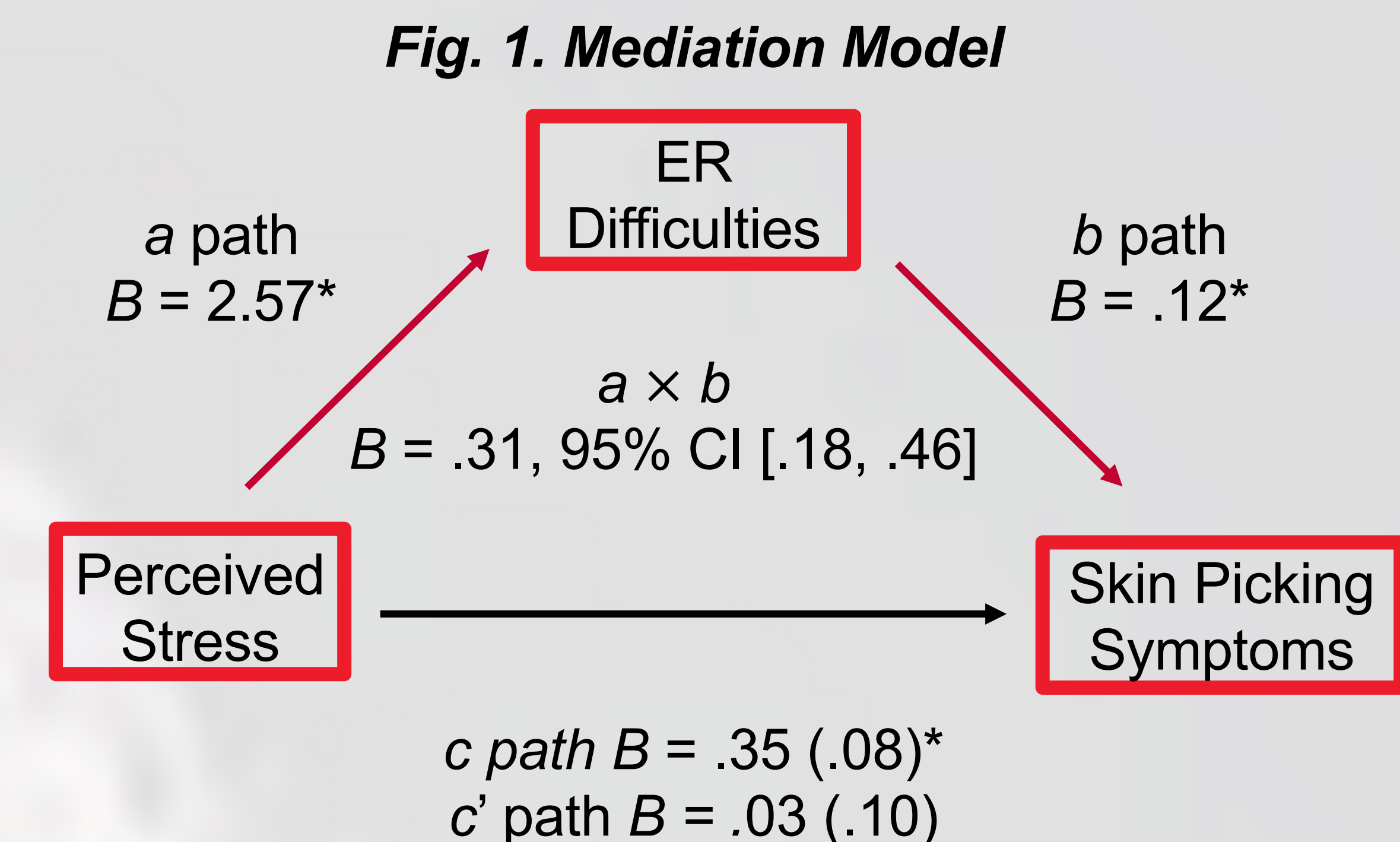
- The sample rated their overall skin condition severity with a mean score of 6.63 (out of 10).
- The suggested clinical cutoff of 9 or greater for skin picking was met by 42.1% ($n = 53$) of the sample.
- Descriptive statistics and bivariate correlations are reported in Table 1.
- Emotion regulation difficulties were a significant mediator of the relationship between perceived stress and skin picking symptoms (indirect effect: $b = .31$, $SE = .07$, $CI: .18$ to $.46$). See Figure 1.

Emotion Regulation Difficulties Mediate the Relationship Between Perceived Stress and Skin Picking Symptoms in Individuals with Eczema

Table 1. Descriptive Statistics and Correlations

	1	2	3
1. Skin Picking Symptoms	--		
2. ER Difficulties	.533*	--	
3. Perceived Stress	.373*	.688*	--
Mean	7.52	90.82	18.97
Standard Deviation	6.75	26.89	7.36

Note: * $p < .001$



DISCUSSION AND IMPLICATIONS

- There were significant positive relationships between perceived stress, skin picking symptoms, and DER in individuals with eczema, consistent with previous research in non-dermatological samples^{3,5,6}.
- DER significantly mediated the relationship between perceived stress and skin picking symptoms in this sample, which is consistent with previous research that examined emotion reactivity and skin picking among non-dermatological university students⁶.
- Our results highlight a need for appropriate assessment and referral for transdiagnostic psychological concerns that may negatively impact dermatological patients.
- The study used self-reported psychological and dermatological measures, meaning participants may have under- or over-reported symptoms and/or impairment and only one perspective was provided.
- Future research comparing the relationship between DER, perceived stress, and skin picking symptoms in a sample with eczema versus a sample with a non-itchy skin disease may provide a better understanding of the role of itch in skin picking symptom severity.



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Title: Emotion Regulation Difficulties Mediate the Relationship Between Perceived Stress and Skin Picking Symptoms in Individuals with Eczema

Background: Difficulties in emotion regulation (DER), referring to an individual's ability to understand and control negative emotions and impulsive behaviors (Gratz & Roemer, 2004), have been linked to increased perceived stress (Extremera & Rey, 2015) and skin picking disorder symptom severity (Roberts et al., 2013). Previous research in dermatological samples found that skin picking is positively associated with emotional distress (Dixon & Snorrason, 2019). In addition, DER and higher perceived stress have been associated with increased levels of emotion disturbances (Extremera & Rey, 2015). However, the relationships between skin picking, DER, and perceived stress have yet to be examined among individuals with eczema. We hypothesized that DER would mediate the relationship between perceived stress and skin picking symptoms in those with eczema.

Method: Adults endorsing current (i.e., in the past four weeks) skin disorder symptoms were recruited through Amazon's MTurk to participate in a study examining associations between dermatological conditions and mental health symptoms. Participants ($N = 126$) who endorsed current symptoms of eczema or atopic dermatitis (i.e., a type of eczema) were included in the current analyses. This sample identified as 67.5% White and 57.9% female, with a mean age of 32.81 ($SD = 10.55$). Participants in this sample completed self-report questionnaires assessing severity of skin picking (SPS-R; Snorrason et al., 2012), difficulties in regulating emotion (DERS; Gratz & Roemer, 2004), and current levels of perceived stress (PSS; Cohen et al., 1983).

Results: Participants ($N = 126$) reported experiencing atopic dermatitis ($n = 29$, 23.0%) and/or eczema ($n = 109$, 86.5%). The sample rated their overall skin condition severity with a mean score of 6.63 (out of 10), which corresponded to moderate severity. Bivariate correlations indicated a significant positive relationship between perceived stress and skin picking ($r = .373$, $p < .001$). Emotion regulation difficulties (DERS total score) and skin picking symptoms (SPS-R total score) also had a significant positive relationship ($r = .533$, $p < .001$). Last, a mediation analysis indicated that emotion regulation difficulties were a significant mediator of the relationship between perceived stress and skin picking (indirect effect: $b = .31$, $SE = .07$, $CI: .18$ to $.46$).

Discussion: There were significant positive relationships between perceived stress, skin picking symptoms, and DER among individuals with eczema, which is consistent with previous research in non-dermatological samples (Grant et al., 2015; Snorrason, Smari, & Olafsson, 2010; Roberts et al., 2013). DER significantly mediated the

relationship between perceived stress and skin picking symptoms in this sample, which is consistent with previous research that examined emotion reactivity and skin picking among non-dermatological university students (Snorrason, Smari, & Olafsson, 2010). Limitations and future directions will be discussed. Overall, results highlight a need for appropriate assessment and referral for psychological concerns that may negatively impact dermatological patients.

Summary: The present study's results advance our current knowledge of the relationships between perceived stress, emotion regulation difficulties, and skin picking symptom severity in a sample with eczema and may inform future directions and clinical implications in the field of psychodermatology.

POSTER REFERENCES

1. Gratz, K. L., & Roemer, L. (2004). Multidimensional Assessment of Emotion Regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1), 41–54.
<https://doi.org/10.1023/b:joba.0000007455.08539.94>
2. Extremera, N., & Rey, L. (2015). The moderator role of emotion regulation ability in the link between stress and well-being. *Frontiers in Psychology*, 6.
<https://doi.org/10.3389/fpsyg.2015.01632>
3. Roberts, S., O'Connor, K., & Bélanger, C. (2013). Emotion regulation and other psychological models for body-focused repetitive behaviors. *Clinical Psychology Review*, 33(6), 745–762. <https://doi.org/10.1016/j.cpr.2013.05.004>
4. Dixon, L. J., & Snorrason, Í. (2019). Prevalence and clinical characteristics of skin picking among adults with skin disease symptoms. *Journal of Obsessive-Compulsive and Related Disorders*, 22, 100454.
<https://doi.org/10.1016/j.jocrd.2019.100454>
5. Grant, J. E., Leppink, E., & Chamberlain, S. (2015). Body focused repetitive behavior disorders and perceived stress: Clinical and Cognitive Associations. *Journal of Obsessive-Compulsive and Related Disorders*, 5, 82–86.
<https://doi.org/10.1016/j.jocrd.2015.02.001>
6. Snorrason, Í., Smári, J., & Ólafsson, R. P. (2010). Emotion regulation in pathological skin picking: Findings from a non-treatment seeking sample. *Journal of Behavior*

Therapy and Experimental Psychiatry, 41(3), 238–245.

<https://doi.org/10.1016/j.jbtep.2010.01.009>