Aesthetic

# Assessing Unrealistic Expectations in Clients Undertaking Minor Cosmetic Procedures: The Development of the Aesthetic Procedure Expectations Scale

Toni D. Pikoos, BSc (Hons),<sup>1,\*</sup> Susan L. Rossell, PhD,<sup>1,2</sup> Nicky Tzimas, MNurs,<sup>3</sup> and Simone Buzwell, PhD<sup>1</sup>

### Abstract

**Objective:** To develop and validate a novel patient-reported measure to assess internally and externally driven expectations for change after a cosmetic procedure, termed the aesthetic procedure expectations (ASPECT) scale.

**Method:** In total, 186 adults recruited from nonsurgical cosmetic clinics in Melbourne, Australia, accessed an online survey (150 completed; 81% response rate) including the novel ASPECT questionnaire, demographics, and measures of psychological distress.

**Results:** The final sample included 141 women and 5 men with a mean age of 44.78 years (standard deviation = 11.68) with <10% missing data. Results supported a two-factor ASPECT scale measuring intrinsic and extrinsic expectations, with high internal consistency and convergent validity. Heightened extrinsic and intrinsic expectations were both associated with individuals who were emotionally distressed, younger, and had previously undertaken more cosmetic procedures. Cutoff scores for the ASPECT subscales are proposed to aid cosmetic practitioners in identifying clients requiring further assessment.

**Conclusions:** The ASPECT scale may provide a reliable and useful clinical tool for cosmetic practitioners to assess unrealistic expectations and determine which clients may require more in-depth consultation before undergoing surgical or nonsurgical cosmetic treatment.

#### Introduction

As the number of individuals seeking cosmetic procedures continues to climb, so do the risks for both clients and practitioners.<sup>1</sup> Although most people are satisfied with cosmetic treatment outcomes, a subsection of people tend to be dissatisfied, which can lead to litigation or reputational damage for the practitioner, as well as potential psychological harm to consumers.<sup>2–4</sup> Of the many factors that may underlie this dissatisfaction, unrealistic expectations have been well documented as a predictor of poor treatment outcome.<sup>5–7</sup>

Prior research has distinguished between intrinsic cosmetic treatment motivations, such as improving one's body image or confidence, and extrinsic motives, such as finding a new romantic relationship, improved employment prospects, or broadening a social network.<sup>8</sup> Several studies have reported small-to-moderate improvements in intrinsic factors, such as self-esteem and body image after cosmetic surgery.<sup>9–12</sup> Thus, clients who report primarily self-driven expectations for treatment are generally considered more realistic and, therefore, more likely to be satisfied with treatment outcomes.<sup>13</sup> In contrast, individuals reporting external motivators are considered less likely to have their expectations met,<sup>6,14–17</sup> with limited evidence indicating any change in social, romantic, or employment factors postprocedure.<sup>18–20</sup> As such, many have proposed that unrealistic (and particularly extrinsic) expectations should be identified and managed to promote client satisfaction.<sup>3,6,7</sup>

Unrealistic expectations often co-occur with other potential contraindications for cosmetic treatment, such as

<sup>&</sup>lt;sup>1</sup>Faculty of Health, Arts and Design, Centre for Mental Health, Swinburne University of Technology, Melbourne, Victoria, Australia.

<sup>&</sup>lt;sup>2</sup>Psychiatry, St Vincent's Hospital, Melbourne, Victoria, Australia.

<sup>&</sup>lt;sup>3</sup>Cosmetic Professional Development Institute of Australia, Melbourne, Victoria, Australia.

<sup>\*</sup>Address correspondence to: Toni D. Pikoos, BSc (Hons), Faculty of Health, Arts and Design, Centre for Mental Health, Swinburne University of Technology, John Street, Hawthorn 3122, Victoria, Australia, Email: tpikoos@swin.edu.au

## **KEY POINTS**

**Question:** How was the aesthetic procedure expectations (ASPECT) scale, designed to measure unrealistic expectations for cosmetic treatment, developed, and validated?

**Findings:** Analysis of the 19-item ASPECT scale revealed two subscales assessing internal expectations (e.g., changes in confidence) and external expectations (e.g., changes in relationships) for cosmetic treatment outcome.

**Meaning:** The ASPECT scale is a reliable self-report tool that can assist practitioners in identifying clients with unrealistic expectations, who may require further consultation before cosmetic treatment.

younger age, low educational attainment, single individuals, and those experiencing psychological distress, indicating several groups who may be at risk of poor cosmetic treatment outcome.<sup>2,21,22</sup> However, much of this research has been conducted in major cosmetic surgery settings, where a drastic change is often desired. This contrasts with nonsurgical treatments wherein the result is generally less noticeable and transient.<sup>23</sup> Therefore, clients with unrealistic expectations undertaking minor cosmetic procedures could pose greater concern as it may indicate a significant misunderstanding of potential treatment outcomes. However, limited empirical research has explored these relationships.

The Medical Board of Australia<sup>24</sup> recently acknowledged the importance of assessing client expectations in their guidelines for cosmetic providers, recommending that practitioners should determine whether expectations are realistic and whether they are externally or internally driven. However, the guidelines did not provide direction on how to assess clients' expectations, likely due to the lack of suitable measures. Although several efforts have been made to assess expectations, <sup>2,21,25–27</sup> previous measures have been riddled with limitations.

These limitations include over-reliance on open-ended questions,<sup>21</sup> a narrow focus only on expectations for physical change,<sup>26</sup> or questionnaires specific to a single cosmetic procedure. In a clinical setting where assessments need to be time efficient, open-ended questions can be impractical, leaving too much onus on practitioners. Furthermore, many seek cosmetic procedures for psychosocial reasons, rather than purely appearance change.<sup>28</sup> Although procedure-specific measures may be useful, many individuals obtain multiple cosmetic procedures at one time (particularly in nonsurgical treatment settings),<sup>29,30</sup> calling for a broader expectations measure that can be used across a variety of treatments. Finally, previous measures have not considered the distinction between intrinsic and extrinsic treatment expectations,<sup>2</sup> which is important given that intrinsic expectations are often considered normative and realistic.

The current research aimed to address these limitations by developing a new patient-reported measure to assess unrealistic intrinsic and extrinsic cosmetic treatment expectations. The measure was validated in a minor cosmetic treatment setting, due to the lack of research in this domain. A better understanding of the psychosocial needs of minor cosmetic treatment clients is required, as nonsurgical procedures are less regulated and accessed by a vaster range of individuals than cosmetic surgery.<sup>31</sup> To address this aim, relationships between the expectations measure and other client factors (age, number of previous cosmetic procedures undertaken, motivations, and psychological distress) are explored to determine whether the clientele presenting for minor cosmetic treatments display the same vulnerabilities as those typically seeking out major cosmetic surgeries.

#### Methods

Ethical approval was obtained from the Swinburne University of Technology ethics committee. The original 23 items included in the expectations measure were developed during a pilot study by the authors (n = 137 individuals seeking minor cosmetic procedures), where participants answered open-ended questions regarding their motivations for treatment. Thematic coding of participant responses was conducted and adapted into future-oriented statements regarding expectations for their next cosmetic treatment. Additional items were selected from the literature.<sup>2,6,13,32</sup> Items were coded into two groups relating to (a) intrinsic change (either appearance related or psychological) or (b) extrinsic change (relationships, employment, etc.). The final items were reviewed and approved by a team of three experts in the cosmetic industry, three body dysmorphic disorder researchers, and three cosmetic consumers for face validity and comprehensibility.

#### Participants

Participants were recruited through e-mail distribution lists from client databases at three clinics in Melbourne, Australia, providing minor cosmetic procedures. All participants were required to be >18 years of age and speak sufficient English to comprehend the questions. The survey was accessed by 186 individuals and completed by 150 individuals (145 women, 5 men; 81% response rate). The small proportion of men is reflective of a typical cosmetic population.<sup>31</sup>

#### Measures

The survey included demographic questions (age, gender, and marital status) and questions regarding cosmetic treatment history. Participants then completed a battery of measures that are detailed hereunder.

Treatment motivation. Participants selected their motivations for cosmetic treatment from a checklist of common motivations (developed by the authors in an unpublished pilot study), including items rated by the researchers as intrinsic (e.g., to feel more confident about myself) or extrinsic (e.g., to find a new romantic partner). The total number of intrinsic and extrinsic motivations was summed.

Psychological distress. Psychological distress was measured by the Kessler psychological distress scale  $(K10)^{33}$  and depression anxiety and stress scale 21-item version (DASS-21),<sup>34</sup> with the K10 yielding a global estimate of anxiety and depression over the previous 4 weeks and the DASS-21 providing scores for anxiety, depression, and stress over the past week. Scores are totaled for each scale, with higher scores indicating greater psychological distress.

Aesthetic Procedure Expectations Scale. The first iteration of the aesthetic procedure expectations (ASPECT) scale consisted of 23 items wherein participants rated the extent to which each item would be different after their next cosmetic procedure. Questions related to two subscales: intrinsic expectations (11 items; e.g., "my confidence will improve") and extrinsic expectations (12 items; e.g., "romantic partners will be more attracted to me"). Each item was rated on a 4-point scale (strongly disagree to strongly agree). A neutral option was excluded to force participants to answer with a direction, which is suggested when evaluating uncertain future events or where social desirability may affect responses.<sup>35</sup> After statistical analyses, the ASPECT scale was reduced to 19 items, detailed in the results.

### Procedure

Participants completed the ASPECT scale and associated questionnaires as part of an online survey administered on the Qualtrics platform.<sup>36</sup> The ASPECT scale took between 1 and 2 min to complete.

Data were analyzed using IBM Statistical Package for Social Sciences (SPSS) v26. Missing data were imputed using expectation-maximization imputation (n=2). When >10% of the data were missing, the case was removed (n=2).<sup>37</sup> The final sample included 146 participants (141 women, 5 men). Owing to the small number of men, statistical analyses were conducted both including and excluding male participants. As the overall results did not differ, men were included in the reported analyses.

Construct validity. To evaluate whether items could be grouped into two scales distinguishing intrinsic and extrinsic expectations, exploratory factor analysis (EFA) with oblique rotation was deemed most suitable.<sup>38,39</sup> The Kaiser–Meyer–Olkin statistic for the current scale was 0.91 indicating sampling adequacy, with a significant Bartlett's test of sphericity.<sup>38,39</sup> Item–total correlations with a factor loading of  $\geq 0.45$  were considered acceptable

given the sample size.<sup>40</sup> Components with eigenvalues >1.0 were retained according to Kaiser's criterion.<sup>41</sup>

Convergent validity. To examine convergent validity, ASPECT total score was correlated with the total number of intrinsic and extrinsic motivations. Given that ASPECT items were developed from the motivations questionnaire, it was expected that ASPECT total score would correlate positively with both intrinsic and extrinsic treatment motivations. However, as ASPECT scale was designed to measure unrealistic, rather than normative, expectations, it was predicted that the correlation between ASPECT score and extrinsic treatment motivations would be stronger than intrinsic motivations, which was assessed by a Fisher's *r*-to-*Z* transformation.

The ASPECT scale was correlated with demographic and psychosocial variables to determine whether interrelationships reported in the literature would be replicated with the new scale. These variables included age, number of previous cosmetic treatments, and psychological distress.<sup>2,21,22</sup> It was expected that total ASPECT score would negatively correlate with age, and positively correlate with number of past procedures and psychological distress scores. As the data were skewed on several variables, Spearman's correlations were calculated. To account for multiple correlations, a Bonferroni correction was applied ( $\alpha = 0.05/10 = 0.005$ ).

#### Results

The demographic and psychosocial characteristics of the final sample included in statistical analyses are displayed in Table 1.

#### **Exploratory factor analysis**

Before factor analysis, internal consistency of the 23-item scale was excellent, with Cronbach  $\alpha = 0.95$ . Four of the original 23 items were removed due to low item-total correlations (i.e., <0.45). This resulted in a 19-item scale with two factors, together accounting for 57.98% of the variance in ASPECT score. Factor pattern and structure coefficients are presented in Table 2, along with item means and communalities. The first factor consists of 11 items measuring "extrinsic expectations" and accounts for 45.65% of the variance. This scale relates to expectations for change in relationships, employment, and social media. The second factor includes eight items relating to "intrinsic expectations," accounting for 12.33% of the variance. These items relate to changes in mood, confidence, and appearance after the procedure. A total score of the 19 items was generated (ranging from 19 to 76), as well as individual subscale scores (intrinsic scale 8-32; extrinsic scale 11-44). Mean ASPECT scores are displayed in Table 2. Internal consistency estimates were computed for the

Table 1.	Demogr	aphic	and	psychosocial
character	ristics of	the sa	mpl	e

Sample characteristics

Age, mean (SD)	44.78 (11.68
Gender, $n$ (%)	
Women	141 (96.6)
Men	5 (3.4)
Relationship status, n (%)	
Single	43 (31.1)
Married/in a relationship	95 (68.9)
Seeking relationship	24 (17.8)
Relationship satisfaction, out of 10, mean (SD)	8.28 (1.95)
Number of previous cosmetic treatments, median (IQR)	7.50 (9.75)
Type of previous cosmetic treatment, $n$ (%)	
No previous treatment	25 (18.0)
Minor cosmetic procedures only	99 (71.2)
Nonsurgical injectables (e.g., neurotoxin injection, fillers)	104 (91.2)
Nonsurgical laser treatments (e.g., hair removal, resurfacing)	50 (35.7)
Mammoplasty (e.g., augmentation, reduction)	26 (22.8)
Facial contouring (e.g., rhinoplasty, cheek or chin enhancement)	11 (9.6)
Body contouring (e.g., abdominoplasty, liposuction)	9 (7.9)
Facial rejuvenation (e.g., rhytidectomy, blepharoplasty, etc.)	4 (3.5)
Psychological distress, median (IQR)	
K10 total score	17.00 (11.00
DASS depression	4.00 (12.00
DASS anxiety	2.00 (10.00
DASS stress	8 00 (13 50

n = 146. Where variables were not normally distributed, median and IQR scores are provided.

DASS, depression anxiety and stress scale; IQR, interquartile range; K10, Kessler psychological distress scale; SD, standard deviation.

total ASPECT scale ( $\alpha = 0.93$ ) and subscales (intrinsic  $\alpha = 0.87$ ; extrinsic  $\alpha = 0.93$ ).

#### **Convergent validity**

Spearman's correlations between ASPECT scores and demographic/psychosocial variables are presented in Table 3. The ASPECT total score was not significantly related to the number of intrinsic motivations reported by participants ( $r_s$  (139)=0.10, p=0.24), but positively correlated with extrinsic motivations ( $r_s$  (139)=0.23, p<0.001). Although the correlation between extrinsic motivations and ASPECT total score was of larger magnitude than the correlation between intrinsic motivations and ASPECT score, this difference was not statistically significant (z=-1.06, p=0.14).

Age was negatively correlated with the intrinsic subscale but was not associated with the extrinsic subscale or ASPECT total score. Total ASPECT and intrinsic expectations scores were positively associated with the number of previous cosmetic procedures undertaken. Psychological distress scores on the K10 and DASS-21 subscales positively correlated with all three ASPECT scales.

#### Determination of cutoff scores

Potential ASPECT cutoff scores were identified to assist cosmetic practitioners in determining which clients may require further assessment. Cutoff scores at 1 SD from the mean (28 for intrinsic; 26 for extrinsic; Supplementary

## Table 2. Rotated factor pattern and structure matrices for the aesthetic procedure expectations scale, communalities, means, and standard deviations

	Factor 1		Facto	or 2			
	Р	S	Р	S	H <sup>2</sup>	м	SD
Factor 1: extrinsic expectations						18.30	7.45
1. People will enjoy working with me more.	0.88	0.85	-0.05	0.35	0.73	1.53	0.79
2. People will want to include me.	0.84	0.81	-0.08	0.31	0.65	1.62	0.85
3. This procedure will boost my social media profile.	0.84	0.83	-0.03	0.36	0.69	1.62	0.86
4. New people will want to get to know me.	0.82	0.85	0.06	0.43	0.72	1.66	0.87
5. People close to me will want to be seen with me.	0.81	0.78	-0.05	0.31	0.61	1.55	0.83
<ol> <li>I will get more social media followers (if you do not currently use social media, imagine that you did).</li> </ol>	0.79	0.76	-0.07	0.30	0.58	1.61	0.87
7. My luck will change for the better.	0.70	0.75	-0.03	0.55	0.47	1.53	0.78
8. My job prospects will improve.	0.69	0.74	0.08	0.60	0.54	1.82	0.93
9. I will enjoy my job more.	0.65	0.73	0.15	0.40	0.53	1.75	0.95
10. My close relationships will improve.	0.63	0.69	0.26	0.55	0.61	1.72	0.90
11. I would be happier to use social media.	0.59	0.74	0.33	0.60	0.63	1.87	1.05
Factor 2: intrinsic expectations						22.18	5.53
12. My confidence will improve.	0.01	0.38	0.81	0.81	0.66	2.96	0.97
13. I will look wonderful.	-0.12	0.23	0.76	0.71	0.51	2.82	0.85
14. I will like the way I look in the mirror.	-0.18	0.16	0.74	0.66	0.46	3.07	0.82
15. My overall mood will improve.	0.15	0.48	0.73	0.80	0.65	2.55	1.05
16. I will be happier.	0.06	0.39	0.71	0.74	0.55	2.68	0.92
17. I will feel more confident to attend social events.	0.25	0.55	0.64	0.75	0.62	2.52	1.08
18. I will not feel embarrassed about the way I look.	0.13	0.42	0.63	0.69	0.49	2.52	1.05
19. I will look better in photographs.	0.19	0.40	0.46	0.54	0.32	2.94	0.87

Pattern coefficients with values  $\ge 0.45$  are in bold. Mean and SD for the total score of the intrinsic and extrinsic expectations scales are italicized. n = 146. H<sup>2</sup>, communalities of the measured variables; *P*, pattern coefficients; S, structure coefficients.

Scale	1	2	3	4	5	6	7	8	9	10	11
1. ASPECT scale (total)											
2. ASPECT scale (intrinsic)	0.87**										
3. ASPECT scale (extrinsic)	0.93**	0.66**									
4. Intrinsic motivations	0.10	0.17	0.03								
5. Extrinsic motivations	0.23**	0.15	0.23*	0.24**							
6. No. previous treatments	0.29*	0.28*	0.21	0.18	-0.04						
7. Age	-0.21	-0.24*	-0.13	-0.21*	-0.10	0.16					
8. K10 total score	0.28**	0.27**	0.27**	0.09	0.24*	0.17	-0.13				
9. DASS-21 depression	0.24*	0.23*	0.24**	0.09	0.16	0.11	-0.08	0.75**			
10. DASS-21 anxiety	0.32**	0.23*	0.34**	-0.04	0.15	0.11	-0.12	0.60**	0.57**		
11. DASS-21 stress	0.42**	0.37**	0.38**	0.11	0.23*	0.18	-0.22	0.64**	0.66**	0.70**	

Table 3. Spearman's correlations to examine construct validity of the aesthetic procedure expectations scale

\*Correlation is significant at Bonferroni corrected p < 0.005 level; \*\*correlation is significant at p < 0.001 level. n = 146. ASPECT, aesthetic procedure expectations.

Table S1), as well as the 75th percentile (26 for intrinsic; 24 for extrinsic), were explored. These scores were compared on their ability to differentiate between individuals scoring above and below the cut-point on variables related to unrealistic treatment expectations (age, number of past cosmetic procedures, and psychological distress), with the 75th percentile cutoff demonstrating superior ability to distinguish groups. Table 4 displays the mean scores and Mann–Whitney results (due to non-normality) for these comparisons. Participants scoring above the cut-points on both intrinsic and extrinsic subscales expressed higher levels of psychological distress, were younger, and had previously undertaken more cosmetic procedures than those scoring below the cutoff.

#### Discussion

This study describes the development of a novel measure to assess unrealistic client expectations for psychosocial change after a cosmetic procedure, a known predictor of poor cosmetic treatment outcome.<sup>5–7</sup> The data support a two-factor scale with high internal consistency; an 11item extrinsic expectations subscale regarding change in employment, social media, and relationship factors, and an 8-item intrinsic expectations subscale relating to changes in appearance and self-esteem postprocedure. The emergence of intrinsic and extrinsic subscales is consistent with the design of the measure and literature on expectations in cosmetic clients. This literature generally suggests a distinction between normative intrinsic expectations and unrealistic extrinsic expectations, with the latter more likely to breed client dissatisfaction.<sup>8,13,28</sup>

However, the current findings indicate that both intrinsic and extrinsic expectations can signal concern when reported at heightened levels. The determination of ASPECT cutoff scores revealed that individuals scoring in the upper quartile of the intrinsic scale (i.e., >26 out of 32) and extrinsic scale (i.e., >24 out of 44) were significantly younger and more psychologically distressed than those scoring below the cutoff. They had also previously engaged in more cosmetic procedures, which may indicate reliance on cosmetic treatments for perceived psychosocial benefits. Younger age and emotional distress have both been documented as potential contraindications for treatment,<sup>2,21,22</sup> supporting the notion that the ASPECT tool may help practitioners detect clients most at risk of poor treatment outcome. Contrary to previous suggestions that only extrinsic expectations should alert practitioners,<sup>3,6,7</sup> current results suggest that intrinsic expectations may also indicate a vulnerable client, but a higher threshold (than extrinsic expectations) is needed to signal concern.

When examining convergent validity, the ASPECT scale was significantly correlated with extrinsic, but not intrinsic, motivations. This was contrary to predictions,

 Table 4. Descriptive statistics and group differences between participants scoring above and below 75th percentile cutoff points on the aesthetic procedure expectations intrinsic and extrinsic subscales

	Intrinsic scale					Extrins						
	Score <26	Score ≥26	U	z	Ρ	r	Score <24	Score ≥24	U	z	Ρ	r
Age	46.57 (11.28)	40.68 (11.34)	1257.50	-2.59	0.005	-0.23	46.22 (11.92)	41.73 (11.20)	1242.00	-1.92	0.03	-0.17
No. of previous treatments	8.99 (7.08)	16.33 (15.62)	1479.50	2.57	0.005	0.26	8.81 (7.14)	17.07 (15.24)	1630.50	3.30	< 0.001	0.33
K10	18.58 (8.18)	21.98 (6.72)	2801.50	3.22	< 0.001	0.27	18.56 (8.08)	22.39 (7.00)	2595.00	3.23	< 0.001	0.27
DASS-depression	5.87 (7.72)	9.00 (7.81)	2711.50	2.86	0.002	0.24	6.02 (8.03)	9.28 (7.06)	2529.50	2.96	< 0.001	0.25
DASS-anxiety	4.62 (6.16)	7.15 (6.75)	2586.00	2.31	0.01	0.19	4.34 (6.08)	8.28 (6.61)	2690.50	3.76	< 0.001	0.32
DASS-stress	7.83 (14.30)	7.78 (9.46)	2936.00	3.84	< 0.001	0.32	8.13 (8.39)	14.33 (8.19)	2790.00	4.16	< 0.001	0.35
n	104	40					106	36				

Table displays the mean scores (SD) for individuals scoring above and below the cutoff points, as well as Mann–Whitney U values, standardized test statistics (Z), one-tailed significance values (P), and effect sizes (r) for group-based comparisons. The number of individuals scoring above and below the cutoff values on each scale is reported (n).

however may support the notion that the ASPECT scale specifically targets unrealistic treatment expectations, whereas intrinsic motivations reported in the current study (e.g., improving self-esteem or appearance) are typical of cosmetic clients and believed to be reasonable. Hence, the lack of association between the ASPECT scale and intrinsic motivations provides preliminary divergent validity, as the ASPECT scale is uniquely associating with unrealistic treatment motivations. However, this result must be interpreted with caution due to the small effect size and should be validated in larger samples.

Current results also provide evidence regarding relationships between expectations and other client factors, within a population seeking minor cosmetic treatments. Age was negatively correlated with intrinsic expectations but not with extrinsic expectations. This was unexpected, given previous research suggesting that younger adults are motivated by social acceptance and peer relations.<sup>32,42,43</sup> This may reflect the relative lack of participants <25 years in our sample, limiting the ability to detect expectations typical of a younger population who are increasingly seeking cosmetic procedures.<sup>31</sup>

However, younger participants in the current sample were more likely to report extreme levels of intrinsic expectations (in the top quartile) and were more emotionally distressed, suggesting that younger individuals may pursue cosmetic treatment in hope of internal psychological change rather than external factors. This unexpected finding may also reflect the differences between individuals seeking minor cosmetic treatments, rather than major surgeries as in prior research. Younger adults may be more realistic about the possibilities for minor procedures (in contrast to major procedures), and less likely to expect social or employment change as a result. However, further investigation in individuals <25 years is warranted.

Individuals scoring above the cut-point on the intrinsic and/or extrinsic subscales reported higher levels of depression, anxiety, and stress on both the DASS-21 and K10. This supports findings that individuals experiencing psychological distress are more likely to display unrealistic expectations for major cosmetic surgeries,<sup>2,6</sup> and extends these to clients seeking minor procedures. Individuals with psychological disorders may be most vulnerable if a cosmetic procedure does not meet expectations, as it can exacerbate pre-existing symptoms and potentially lead to further unnecessary or harmful cosmetic treatments or, in extreme cases, suicide.<sup>20</sup> The replication of the relationship between emotional distress and unrealistic expectations in a sample seeking minor cosmetic treatments emphasizes the importance of psychosocial screening for both surgical and nonsurgical procedures.

Some limitations were present. Although the sample size is sufficient for EFA, it is modest for validity estimates and determination of cutoff scores. Replication with larger and more diverse samples is required to allow for analyses stratified by gender, age, and cosmetic treatment history. Owing to the absence of a gold standard measure of unrealistic expectations for cosmetic treatment, it was not possible to address criterion validity in this study. However, future research could look to examine the relationship between the ASPECT scale and previous measures of expectations. Inclusion of a comparable expectations measure would allow further validation of the cutoff points proposed in this study using more advanced approaches, such as the receiver operating characteristic curve.

This study focused on a sample seeking minor cosmetic treatments, due to the lack of psychosocial research in this domain. However, as the ASPECT scale is not specific to any cosmetic procedure, it may prove useful in other settings, such as cosmetic surgeries or beauty salons, although validation in these populations is required. In addition, prospective research is recommended to determine the predictive validity of the ASPECT scale for satisfaction with treatment outcome.

#### Conclusions

The 19-item ASPECT measure was found to be highly reliable, time efficient, and can uniquely differentiate between intrinsic and extrinsic expectations. The current findings indicate that heightened extrinsic and intrinsic expectations are both associated with psychosocial and demographic contraindications for treatment (i.e., emotional distress, history of multiple cosmetic treatments, and younger age) in a sample of individuals seeking minor cosmetic procedures, similar to previous findings in surgical settings.<sup>2,6</sup>

Clients scoring highly on the ASPECT (>26 on the intrinsic or >24 on the extrinsic) subscales may be at risk of poor cosmetic treatment outcomes and may require further psychosocial assessment before treatment. Clients who report heightened expectations for either surgical or nonsurgical cosmetic procedures may need a longer consultation that not only involves managing expectations regarding appearance change or postoperative pain, but also delves into the client's psychosocial expectations for the procedure. Unmet expectations can have negative consequences for the client, who may feel hopeless and disillusioned after cosmetic treatment, as well as the practitioner who may be subject to complaints or litigation.<sup>2,4</sup> The ASPECT measure can assist practitioners in swiftly identifying clients who may require further attention, protecting the client and practitioner's best interests.

#### **Authors' Contributions**

The authors' responsibilities were as follows: all authors provided input into the design of the research; N.T. assisted in data collection and recruitment; T.D.P., S.B., and S.L.R. analyzed the data; T.D.P. conducted the research and had primary responsibility for the final content of the article; and all authors edited and approved the final article. T.D.P. had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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#### **Author Disclosure Statement**

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#### **Supplementary Material**

Supplementary Table S1

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