Supplemental Table 1. Comparison of Self-reported Early Life Characteristics between Included and Excluded Study Participants, SELF (2011-2018), N=1,693

	%	
Childhood Characteristics	**Excluded N=138**	**Included N=1,555**
Highest Educational Attainment of Primary Caregiver		
≤High School or GED	43	47
Some College/Associate or Technical Degree	41	42
≥Bachelor's Degree	16	11
Household Income during Most of Childhood		
Well-off	12	7
Middle Income	49	53
Low Income/Poor	39	40
Two-parent Household		
Yes	54	52
No	46	47

	Excluded	Included	
Adulthood Characteristics	**Enrollment**	**Enrollment**	**Follow-up**
Mean age ± SD, years	29.0±3.6	29±3.4	33±3.4
Educational Attainment			
≤High School or GED	22	22	16
Some College/Associate or Technical Degree	46	50	52
≥Bachelor's Degree	33	28	33
Total Annual Household Income			
<$20,000	52	45	36
$20,000-$50,000	28	38	39
>$50,000	20	17	25
Current full- or part-time employment (yes)	54	63	78
Marital Status			
Married/Living with Partner	25	28	41
Divorced/Separated/Widowed	13	14	20
Never Married	62	58	39

Abbreviations: SELF=Study of Environment, Lifestyle, and Fibroids; GED=General Education Diploma; SD=standard deviation

Percentages may not sum to 100 due to rounding.

≤1% missing for parental educational attainment, household income during childhood, two-parent household, educational attainment at enrollment, annual household income at enrollment, current employment at enrollment, and among included participants: participant educational attainment and participant annual household income.

Supplemental Table 2. Hair product usage assessment and original response options

Life Stage	Hair Product	Assessment Date		Assessment	Response Options
		CAWI 2011	**CAWI 2013-2014 or 2016-2018**		
Childhood	**Leave-in conditioner**	X		How often was your hair treated with leave-in conditioners or other products that remained on your hair rather than being rinsed out when you were around [5 years old; 10 years old; 15 years old]?	*About everyday; 3 to 5 times a week; 1 to 2 times a week; 1 to 3 times a month; rarely or never*
Childhood	**Chemical straightening product, relaxer, or perm**	X		How often was your hair treated with chemical products that change the texture of your hair such as a Jheri curl, relaxer, or perm when you were around [5 years old; 10 years old; 15 years old]?	*10 or more times a year; 5 to 9 times a year; 2 to 4 times a year; once a year; rarely or never*
Adulthood	**Leave-in conditioner** [a]		X	During the past 12 months, what type of hair conditioner, crème rinse, or de-tangler did you (or others) use on your hair? Please enter a response for each row. [Rinse-off conditioner] [Leave-in conditioner]	*Yes; no*
Adulthood	**Chemical straightening product, relaxer, or perm** [b]		X	In your entire life, have you ever had hair relaxers, straighteners, or perms applied to your hair? How old were you when relaxers, straighteners, or perms were first used on your hair? Which of the following types of hair relaxers, straighteners, or perms have ever been used on your hair? Please enter a response for each row.	*Yes; no* *≤10 years old, 11-19; 20-22; 23 or older*

			Question	Response options
			[Permanent relaxer (hair does not go back to its original state) containing lye] [Permanent relaxer containing 'low lye'] [Permanent relaxer containing thio] [Permanent relaxer, but don't know what is in it] [Temporary relaxer (hair goes back to its original state) containing keratin] [Temporary relaxer containing non-keratin product] [Temporary relaxer, but don't know what is in it]	*Yes; no*
			During the past 12 months, about how often did you or someone else apply hair relaxers, straighteners, or perms to your hair?	*12 or more times; 6-11 times; 2-5 times; once; did not use in past 12 months*
Adulthood	Shampoo	X	During the past 12 months, about how often did you or someone else wash your hair? If this varied depending on your hairstyle, think about the time when you were washing your hair the most.	*2 times a day or more; once a day; 2-6 times a week; once a week; 1-3 times a month; less than once/month; did not use this in past 12 months*
Adulthood	Growth/moisturizing products		During the past 12 months, about how often did you (or others) use any of the following in your hair?	
		X	[100% Petroleum jelly (Vaseline)] [100% Shea butter] [Natural plant-based oils] [Hair food] [Moisturizing creams or lotions] [Conditioners, crème rinses, or de-tanglers. (Do not include cleansing or "co-wash" conditioners you may have used for washing your hair.)]	*2 times a day or more; once a day; 2 to 5 times a week; once a week; 1-3 times a month; less than once a month; did not use in past 12 months*

Adulthood	**Styling products**		During the past 12 months, about how often have any hair styling products such as styling gel, mousse, pomade, hair grease, oil sheens, styling sprays, spritzes, setting lotions, or any other products used to style hair not previously mentioned been used on your hair?	*2 times a day or more; once a day; 2-6 times a week; once a week; 1-3 times a month; less than once a month; did not use in past 12 months*
		X	During the past 12 months, did you (or others) use any of the following hair products at least weekly on your hair? Please enter a response for each row.	
			[Hair spray or styling spritz] [Styling gel] [Mousse] [Pomade] [Hair grease] [Oil sheen] [Setting lotion]	*Yes; no*
Adulthood	**Coloring products**		During the past 12 months, about how often did you (or others) use any of the following hair coloring products in your hair? Please enter a response for each.	
		X	[Henna] [Rinses that fade after several washings] [Semi-permanent hair dye (fades in 6-8 weeks)] [Permanent hair dye (roots start to show as the color grows out)] [Products to bleach, frost, or highlight your hair]	*More than once a month; 9-12 times a year; 4-6 times a year; 1-3 times a year; did not use in the past 12 months*
			During the past 12 months, about how often did you get a hair gloss treatment?	*More than once a month; 9-12 times; 4-8 times; 1-3 times;*

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*did not do this in the
past 12 months*

Abbreviations: CAWI=Computer Assisted Web Interview

[a] A skip pattern was used for assessment of leave-in conditioner usage during adulthood (12 months prior to interview). Participants were first asked about usage of any type of conditioner. Participants who reported using any type of conditioner at least once per month were then asked what type of conditioner was used (rinse-off or leave-in).

[b] A skip pattern was used for assessment. Participants who responded 'yes' to ever using relaxers in their lifetime were asked about age of first use; type of hair relaxers, straighteners, or perms ever used; and usage in 12 months prior to interview.

Supplemental Table 3. Types of Relaxers Used Across Childhood, Adolescence, and Adulthood (Prior 12 Months) among Participants Who Reported Ever Using Relaxers in Their Lifetime, Study of Environment, Lifestyle, and Fibroids (2013-2018), N=1,384*

Relaxer Usage Behaviors	%
Age at first use, years	
≤19	96
20-22	3
23+	1
Permanent Relaxer (*Any*) **	*71*
Lye	40
Low-Lye	35
Other/Unknown Composition	34
Temporary Relaxer (*Any*) **	*37*
Keratin	19
Non-Keratin	8
Unknown Composition	24

* 171 (11%) participants reported no lifetime relaxer usage.
All percentages expressed over N=1384 participants who reported ever use of relaxers.
** Types of relaxer (permanent or temporary as well as subtypes) used are not mutually exclusive (each category represents the percent use among those who ever reported using a relaxer).
≤0.5% missing for types of relaxers used

Supplemental Table 4. Unadjusted Odds Ratios and 95% Confidence Intervals for Medium and High vs. Low Leave-in/Leave-on Conditioner and Chemical Relaxer/Straightener Use at Ages 5, 10, and 15 Years Associated with Childhood Socioeconomic Characteristics, SELF (2013-2018), N=1,555 [a]

Childhood Socioeconomic Characteristics	Odds Ratio (95% Confidence Interval)					
	Leave-in/-on Conditioner					
	Age 5		Age 10		Age 15	
	Medium vs. Low	High vs. Low	Medium vs. Low	High vs. Low	Medium vs. Low	High vs. Low
Highest Educational Attainment of Primary Caregiver						
≤High School or GED	1.21 (0.80-1.83)	0.80 (0.53-1.20)	1.25 (0.85-1.84)	0.93 (0.62-1.41)	1.10 (0.73-1.65)	0.88 (0.56-1.37)
Some College/Associate or Technical Degree	0.91 (0.60-1.40)	0.72 (0.48-1.09)	1.10 (0.75-1.63)	0.85 (0.56-1.30)	1.05 (0.69-1.59)	0.98 (0.63-1.55)
≥Bachelor's Degree	ref	ref	ref	ref	ref	ref
Household Income during Most of Childhood						
Well-off	ref	ref	ref	ref	ref	ref
Middle Income	1.45 (0.86-2.48)	0.85 (0.53-1.36)	1.21 (0.76-1.93)	0.88 (0.54-1.44)	0.89 (0.54-1.49)	0.80 (0.46-1.40)
Low Income/Poor	1.17 (0.68-2.00)	0.58 (0.36-0.94)	1.03 (0.64-1.66)	0.73 (0.44-1.20)	0.84 (0.50-1.41)	0.74 (0.42-1.30)
Two-parent Household						
Yes	ref	ref	ref	ref	ref	ref
No	1.17 (0.91-1.49)	1.18 (0.91-1.53)	1.07 (0.85-1.34)	1.18 (0.91-1.54)	1.11 (0.87-1.43)	1.14 (0.87-1.51)
	Chemical Relaxer/Straightener					
	Age 5		Age 10		Age 15	
	Medium vs. Low	High vs. Low	Medium vs. Low	High vs. Low	Medium vs. Low	High vs. Low
Highest Educational Attainment of Primary Caregiver						
≤High School or GED	1.43 (0.54-3.77)	1.40 (0.75-2.59)	1.68 (0.94-3.03)	1.34 (0.93-1.93)	**3.03 (1.57-5.82)**	**1.99 (1.34-2.94)**
Some College/Associate or Technical Degree	1.10 (0.41-2.98)	1.04 (0.55-1.96)	1.40 (0.77-2.56)	1.45 (1.00-2.09)	1.91 (0.97-3.76)	**2.08 (1.40-3.10)**
≥Bachelor's Degree	ref	ref	ref	ref	ref	ref

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Household Income during Most of Childhood						
Well-off	ref	ref	ref	ref	ref	ref
Middle Income	0.86 (0.29-2.53)	1.22 (0.57-2.62)	1.49 (0.72-3.10)	1.37 (0.88-2.14)	1.57 (0.70-3.51)	1.19 (0.74-1.92)
Low Income/Poor	1.10 (0.38-3.25)	1.24 (0.57-2.69	1.81 (0.7-3.79)	1.50 (0.95-2.35)	**2.36 (1.03-5.40)**	**1.90 (1.14-3.15)**
Two-parent Household						
Yes	ref	ref	ref	ref	ref	ref
No	1.19 (0.68-2.10)	0.95 (0.66-1.36)	1.12 (0.81-1.57)	1.22 (0.98-1.51)	0.92 (0.62-1.37)	0.96 (0.73-1.25)

Abbreviations: SELF=Study of Environment, Lifestyle, and Fibroids; GED=General Education Diploma; ref=reference

High corresponds to use ≥twice/year for chemical relaxer/straightener and ≥once/week for leave-in/leave-on conditioner. Medium corresponds to use once/year for chemical relaxer/straightener and 1-3 times/month for leave-in/leave-on conditioner. Low/no corresponds to never/no use of chemical relaxer/straightener and rarely/never use of leave-in/leave-on conditioner.

Bolded values indicate statistical significance at a two-sided p=0.05.

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Supplemental Table 5. Unadjusted Odds Ratios and 95% Confidence Intervals for Medium and High vs. Low Leave-in/Leave-on Conditioner and Chemical Relaxer/Straightener Use in the Past 12 Months Associated with Adulthood Socioeconomic Characteristics, SELF (2013-2018), N=1,555 [a]

Adulthood Sociodemographic Characteristics	Odds Ratio (95% Confidence Interval			
	Leave-in/-on Conditioner		Chemical Relaxer/Straightener	
	Medium vs. Low	High vs. Low	Medium vs. Low	High vs. Low
Educational Attainment				
≤High School or GED	**0.29 (0.18-0.46)**	**0.35 (0.23-0.52)**	**5.47 (3.39-8.84)**	**2.05 (1.42-2.94)**
Some College/Associate or Technical Degree	**0.64 (0.48-0.86)**	**0.65 (0.50-0.84)**	**2.24 (1.47-3.41)**	**1.89 (1.46-2.45)**
≥ Bachelor's, Master's, or Doctoral Degree	reference	reference	reference	reference
Total Annual Household Income				
<$20,000	**0.50 (0.35-0.71)**	**0.61 (0.45-0.84)**	**5.12 (3.11-8.43)**	**1.79 (1.34-2.41)**
$20,000-$50,000	0.88 (0.64-1.22)	0.93 (0.69-1.27)	**1.76 (1.04-2.99)**	1.13 (0.84-1.51)
>$50,000	reference	reference	reference	reference
Current full- or part-time employment (no vs. yes)	**0.53 (0.37-0.76)**	0.93 (0.70-1.23)	**2.16 (1.52-3.05)**	1.23 (0.94-1.61)
Marital Status				
Married/Living with Partner	reference	reference	reference	reference
Divorced/Separated/Widowed	1.03 (0.72-1.47)	1.38 (1.00-1.91)	1.31 (0.84-2.02)	0.86 (0.63-1.18)
Never Married	0.89 (0.66-1.19)	1.08 (0.82-1.42)	1.41 (0.98-2.03)	0.94 (0.73-1.20)

Abbreviations: SELF=Study of Environment, Lifestyle, and Fibroids; GED=General Education Diploma

High corresponds to use ≥twice/year for chemical relaxer/straightener and ≥once/week for leave-in/leave-on conditioner. Medium corresponds to use once/year for chemical relaxer/straightener and 1-3 times/month for leave-in/leave-on conditioner. Low/no corresponds to never/no use of chemical relaxer/straightener and rarely/never use of leave-in/leave-on conditioner.

Bolded values indicate statistical significance at a two-sided p=0.05.

Supplemental Table 6. Prevalence of Weekly Use of Individual Hair Styling Products in the Past 12 Months, Study of Environment, Lifestyle, and Fibroids (2013-2018), N=1,555

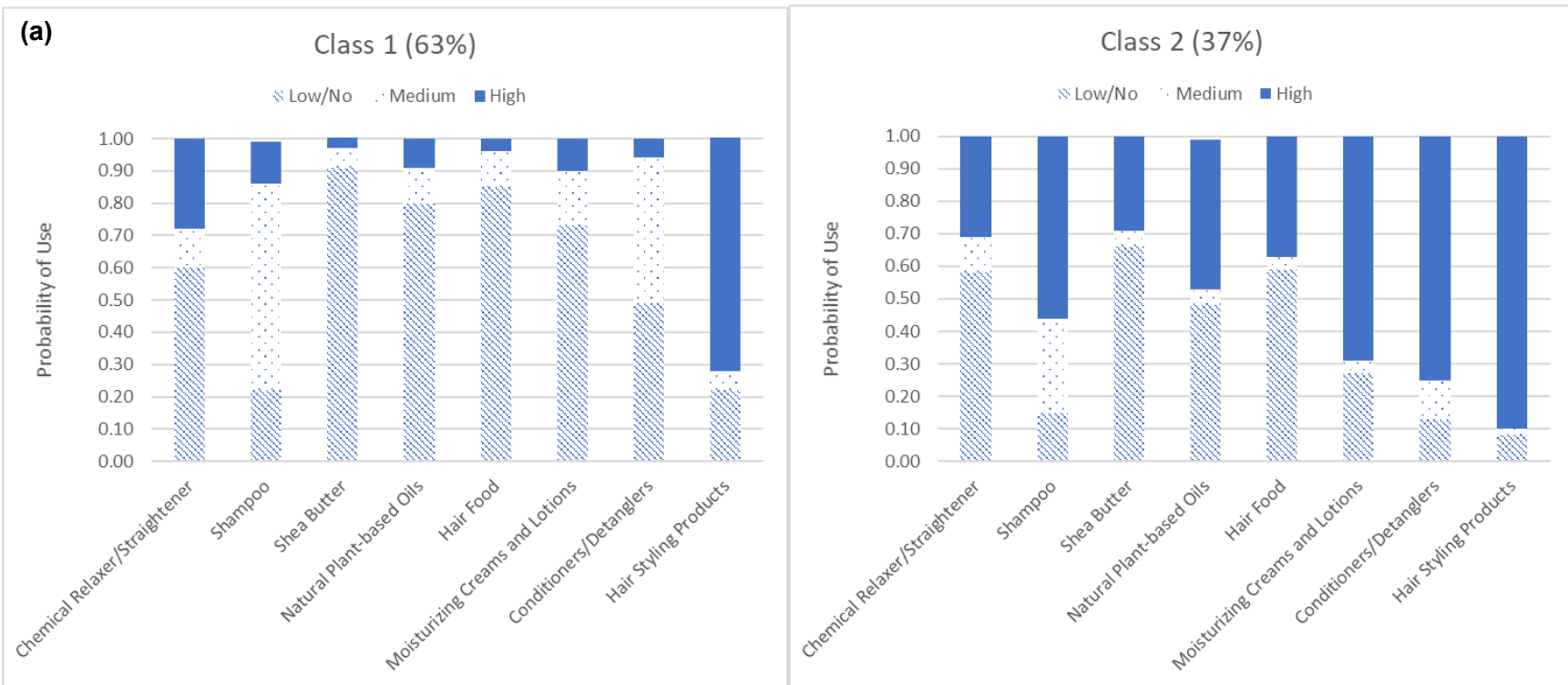| Hair Styling Product	Used One or More Times/Week
	%
	Yes
Any Styling Product	79
Hair Spray or Styling Spritz	31
Styling Gel	36
Mousse	24
Pomade	16
Hair Grease	45
Oil Sheen	52
Setting Lotion	20

<0.05% missing for hair spray or styling spritz, mousse, hair grease, and oil sheen
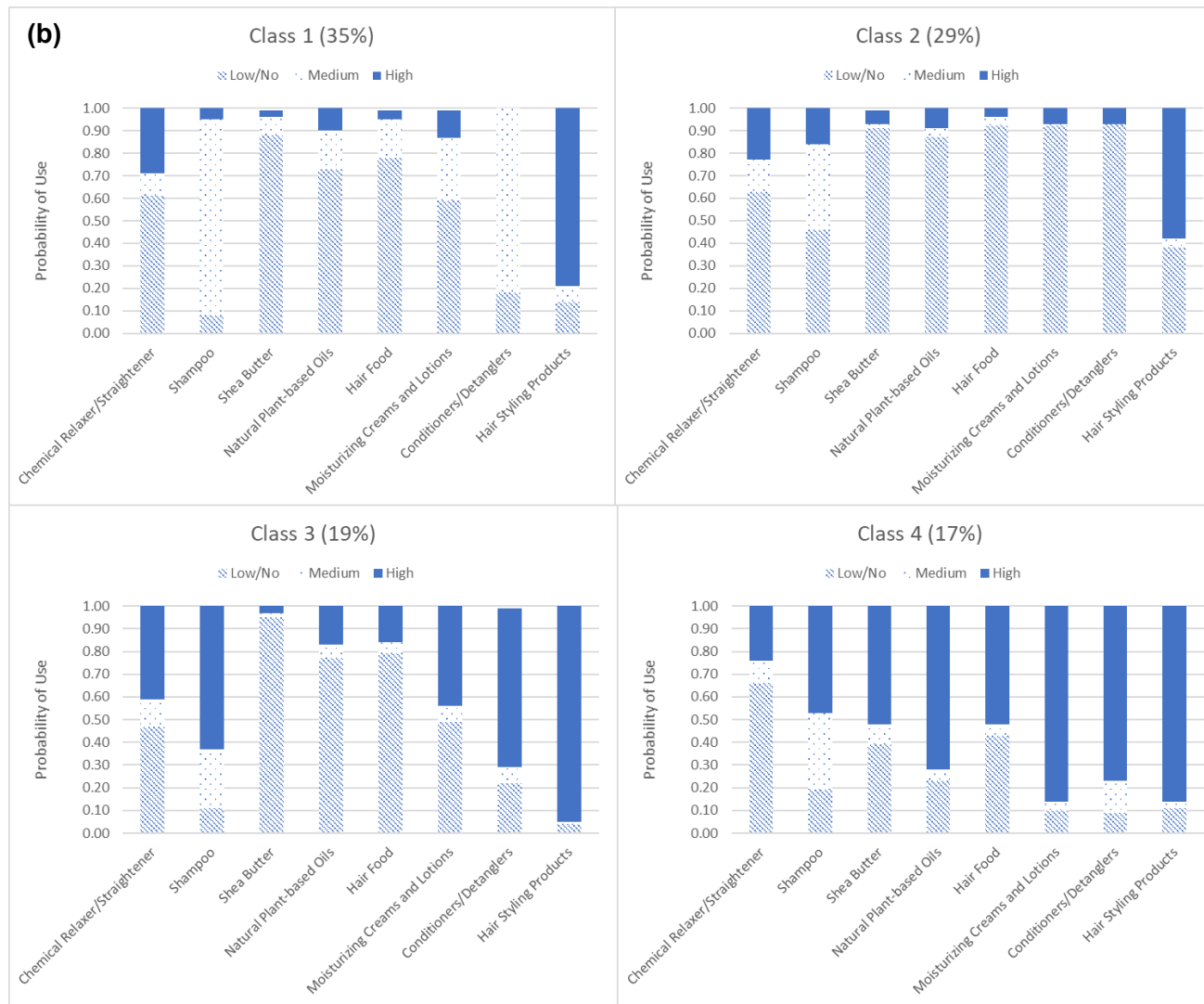
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Supplemental Table 7. Model Fit Statistics for Latent Class Solutions, SELF (2013-2018), N=1,555

Latent Class Solution	AIC	BIC	Log Likelihood (model vs. saturated model)	Likelihood Ratio Test p-value	Smallest Class, % (based on marginal probabilities)
1-Class	20948.338	21033.925	3663.629	1.00	100
2-Class	19824.694	20001.218	2505.985	1.00	37
3-Class	19437.481	19704.943	2084.772	1.00	32
4-Class	19306.495	19664.893	1919.786	1.00	18
5-Class			Model failed to converge		

Abbreviations: SELF=Study of Environment, Lifestyle, and Fibroids; AIC=Akaike's Information Criteria; BIC=Bayesian Information Criteria

Likelihood ratio test is for the model compared to the saturated model. Smallest class percentages were based on marginal probabilities of participants belonging to a latent class; however, class sizes based on posterior probabilities (which were used to determine class membership) may differ from class sizes based on marginal probabilities.

(a)

Figure: Class 1 (63%) and Class 2 (37%) stacked bar charts showing Probability of Use (Low/No, Medium, High) across hair product categories: Chemical Relaxer/Straightener, Shampoo, Shea Butter, Natural Plant-based Oils, Hair Food, Moisturizing Creams and Lotions, Conditioners/Detanglers, Hair Styling Products.

Supplemental Figure 1. Latent Class Membership Associated with Hair Product Usage during Adulthood for the (a) Two-class Solution and (b) Four-class Solution, Study of Environment, Lifestyle, and Fibroids (2013-2018), N=1,555