

SUPPLEMENTARY MATERIALS

Mental Health and Psychosocial Burden Among Patients With Skin of Color Living With Vitiligo: Findings From the Global VALIANT Study

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SUPPLEMENTARY TABLES

Table S1. Perceived Impact of Vitiligo on Self-Esteem, Relationships, and Careers by Fitzpatrick Skin Type^a

	Fitzpatrick Skin Type						
	I	II	III	IV	V	VI	All patients
Characteristic, n (%)	(n=317)	(n=1061)	(n=718)	(n=817)	(n=525)	(n=103)	(N=3541)
Self-Esteem/Stigma							
Having vitiligo is part of who I am	154 (48.6)	537 (50.6)	334 (46.5)	409 (50.1)	303 (57.7)	58 (56.3)	1795 (50.7)
Having vitiligo makes me feel less confident/ more self-conscious	163 (51.4)	522 (49.2)	324 (45.1)	377 (46.1)	292 (55.6)	57 (55.3)	1735 (49.0)
No one understands what it’s like to live with vitiligo	156 (49.2)	461 (43.4)	283 (39.4)	377 (46.1)	307 (58.5)	65 (63.1)	1649 (46.6)
Having vitiligo makes me feel less accepted	140 (44.2)	400 (37.7)	242 (33.7)	348 (42.6)	304 (57.9)	51 (49.5)	1485 (41.9)
Having vitiligo makes me feel unique	136 (42.9)	394 (37.1)	228 (31.8)	344 (42.1)	294 (56.0)	63 (61.2)	1459 (41.2)
My vitiligo makes me feel less connected to my heritage/ethnicity	131 (41.3)	340 (32.0)	213 (29.7)	334 (40.9)	272 (51.8)	56 (54.4)	1346 (38.0)
Having vitiligo is a curse	116 (36.6)	326 (30.7)	198 (27.6)	327 (40.0)	267 (50.9)	52 (50.5)	1286 (36.3)
Having vitiligo makes me feel empowered	125 (39.4)	325 (30.6)	164 (22.8)	321 (39.3)	270 (51.4)	53 (51.5)	1258 (35.5)
Having vitiligo has caused me to engage in high-risk behaviors	124 (39.1)	310 (29.2)	180 (25.1)	326 (39.9)	263 (50.1)	50 (48.5)	1253 (35.4)
I worry my vitiligo is a punishment for something I've done	125 (39.4)	302 (28.5)	177 (24.7)	310 (37.9)	282 (53.7)	47 (45.6)	1243 (35.1)
Relationships							
I feel most understood by other people with vitiligo	173 (54.6)	544 (51.3)	391 (54.5)	404 (49.4)	320 (61.0)	61 (59.2)	1893 (53.5)
I find it rewarding to educate others about vitiligo	160 (50.5)	511 (48.2)	321 (44.7)	415 (50.8)	310 (59.0)	57 (55.3)	1774 (50.1)
I often avoid social situations due to my vitiligo	153 (48.3)	397 (37.4)	278 (38.7)	352 (43.1)	288 (54.9)	59 (57.3)	1527 (43.1)
Having vitiligo has negatively impacted how I feel/felt about having children	146 (46.1)	343 (32.3)	241 (33.6)	361 (44.2)	301 (57.3)	56 (54.4)	1448 (40.9)

Characteristic, n (%)	Fitzpatrick Skin Type						All patients (N=3541)
	I (n=317)	II (n=1061)	III (n=718)	IV (n=817)	V (n=525)	VI (n=103)	
People often avoid shaking my hand because of my vitiligo	115 (36.3)	383 (36.1)	259 (36.1)	335 (41.0)	297 (56.6)	49 (47.6)	1438 (40.6)
My family and friends feel pity for me because of my vitiligo	131 (41.3)	380 (35.8)	237 (33.0)	349 (42.7)	279 (53.1)	56 (54.4)	1432 (40.4)
My community has not fully accepted me due to my vitiligo	128 (40.4)	340 (32.0)	220 (30.6)	318 (38.9)	293 (55.8)	56 (54.4)	1355 (38.3)
My vitiligo keeps me up at night, causing me to have trouble sleeping	128 (40.4)	333 (31.4)	229 (31.9)	309 (37.8)	287 (54.7)	55 (53.4)	1341 (37.9)
People in my family experience discrimination/judgment due to my vitiligo	119 (37.5)	316 (29.8)	198 (27.6)	300 (36.7)	277 (52.8)	45 (43.7)	1255 (35.4)
Work/Promotion							
I think I'd be further along in my career if I did not have vitiligo	143 (45.1)	395 (37.2)	274 (38.2)	338 (41.4)	276 (52.6)	57 (55.3)	1483 (41.9)
I might have chosen a different line of work if I didn't have vitiligo	138 (43.5)	384 (36.2)	246 (34.3)	335 (41.0)	273 (52.0)	57 (55.3)	1433 (40.5)
Having vitiligo has helped my career progression	104 (32.8)	290 (27.3)	159 (22.1)	299 (36.6)	258 (49.1)	50 (48.5)	1160 (32.8)

Affirmative responses in ≥50% of patients with any skin type are bolded.

^a Includes patients who responded to these questions with *agree* or *strongly agree*.

Table S2. Formally Diagnosed Mental Health Conditions Among Patients With Vitiligo by Fitzpatrick Skin Type

Mental health condition, n (%)	Fitzpatrick Skin Type						All patients (N=3541)
	I (n=317)	II (n=1061)	III (n=718)	IV (n=817)	V (n=525)	VI (n=103)	
Anxiety disorder	85 (26.8)	262 (24.7)	171 (23.8)	282 (34.5)	191 (36.4)	28 (27.2)	1019 (28.8)
Depression	87 (27.4)	237 (22.3)	122 (17.0)	238 (29.1)	150 (28.6)	32 (31.1)	866 (24.5)
Eating disorder	60 (18.9)	144 (13.6)	61 (8.5)	151 (18.5)	138 (26.3)	25 (24.3)	579 (16.4)
Bipolar disorder	54 (17.0)	92 (8.7)	31 (4.3)	137 (16.8)	137 (26.1)	23 (22.3)	474 (13.4)
PTSD	40 (12.6)	88 (8.3)	41 (5.7)	120 (14.7)	110 (21.0)	26 (25.2)	425 (12.0)
ADHD	41 (12.9)	73 (6.9)	26 (3.6)	114 (14.0)	111 (21.1)	27 (26.2)	392 (11.1)
OCD	28 (8.8)	70 (6.6)	37 (5.2)	92 (11.3)	96 (18.3)	25 (24.3)	348 (9.8)
Substance/alcohol abuse disorder	19 (6.0)	41 (3.9)	19 (2.6)	73 (8.9)	52 (9.9)	11 (10.7)	215 (6.1)
Other	3 (0.9)	17 (1.6)	7 (1.0)	8 (1.0)	3 (0.6)	1 (1.0)	39 (1.1)

Mental health conditions diagnosed in $\geq 25\%$ of patients with any skin type are bolded.

ADHD, attention-deficit/hyperactivity disorder; OCD, obsessive-compulsive disorder; PTSD, posttraumatic stress disorder.

SUPPLEMENTARY FIGURES

Figure S1. Patient QoL Concerns per the VIPs by Fitzpatrick Skin Type^a

Characteristic, n (%)	Skin Type I (n=317)	Skin Type II (n=1061)	Skin Type III (n=718)	Skin Type IV (n=817)	Skin Type V (n=525)	Skin Type VI (n=103)	All Patients (N=3541)
I feel discouraged because of my vitiligo ^{FS}	53.0	36.5	32.2	49.4	57.5	64.1	44.0
My vitiligo has repercussions on my physical appearance ^{FS}	58.0	43.6	39.1	53.0	61.5	61.2	49.3
The progression of my vitiligo worries me (makes me anxious) ^{FS}	56.2	44.4	38.3	51.8	60.2	67.0	48.9
My reflection in the mirror makes me anxious ^{FS}	51.7	39.6	34.0	52.0	59.0	57.3	45.8
I dread nice weather because of my vitiligo ^{FS}	52.1	42.4	35.4	51.2	54.1	63.1	46.2
Questions about my vitiligo bother me, disturb me ^{FS}	55.8	40.3	34.8	49.9	59.4	57.3	46.1
I tend to withdraw into myself because of my vitiligo ^{FS, DS}	51.4	35.8	28.6	45.8	57.0	53.4	41.7
I dread first meetings because of my vitiligo ^{FS, DS}	52.7	40.8	35.7	52.5	56.0	67.0	46.5
I dip into my savings to treat my vitiligo ^{FS, DS}	49.5	38.3	33.8	53.5	61.0	60.2	45.9
I make sacrifices to afford my vitiligo treatments ^{FS, DS}	48.9	36.8	32.6	51.9	57.7	64.1	44.4
Managing my vitiligo on a daily basis is a burden ^{FS, DS}	50.5	40.0	35.5	50.3	59.2	66.0	46.0
I often tell myself that my life would be very different without vitiligo ^{DS}	56.2	42.3	37.7	51.7	57.5	67.0	47.8
I experience my vitiligo as a daily handicap ^{DS}	53.0	39.8	33.1	49.6	57.7	55.3	45.0
My vitiligo has a negative impact on my libido (sexual desire) ^{DS}	47.9	33.3	31.8	46.9	57.1	60.2	41.7
My vitiligo is an obstacle (a barrier) to my sexuality ^{FS}	53.0	33.4	31.1	48.3	61.7	60.2	43.1
In the evening, once I've applied all the creams, I feel depressed ^{DS}	48.3	34.6	31.1	47.9	60.2	59.2	42.7
I have had to change my vacations, leisure activities because of my vitiligo ^{DS}	47.0	37.4	32.3	45.8	59.4	53.4	42.9
I am ashamed of the consequences of my vitiligo ^{DS}	48.9	35.0	34.5	49.4	59.6	58.3	43.8
I feel that medicine has abandoned me ^{DS}	47.9	34.0	27.2	49.8	57.1	57.3	41.6

Less Burden

More Burden

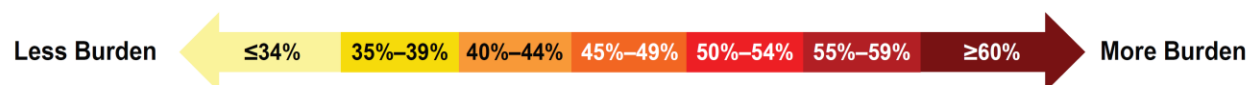
≤34% 35%–39% 40%–44% 45%–49% 50%–54% ≥60%

DS, included in the 12-item VIPs for patients with darker skin; FS, included in the 12-item VIPs for patients with fairer skin; QoL, quality of life; VIPs, Vitiligo Impact Patient scale.

^a A summary of responses including *often*, *very often*, and *all the time* are shown. Questions from the two validated 12-item VIPs were completed by patients with some attributes only applying to fairer (Fitzpatrick skin types I–III) or darker (Fitzpatrick skin types IV–VI) skin.

Figure S2. Impact of Vitiligo on Patient's Daily Lives by Fitzpatrick Skin Type^a

Characteristic, n (%)	Skin Type I (n=317)	Skin Type II (n=1061)	Skin Type III (n=718)	Skin Type IV (n=817)	Skin Type V (n=525)	Skin Type VI (n=103)	All Patients (N=3541)
Determining which clothes to wear	59.0	51.6	45.1	57.2	68.4	69.9	55.2
Going to the beach or pool	58.0	46.7	41.5	51.5	66.3	62.1	51.1
Going to work/school	52.1	41.8	34.1	52.3	63.4	64.1	47.4
Being intimate with spouse/partner	50.5	39.5	35.0	52.9	62.7	64.1	46.8
Attending parties/events	54.6	41.6	36.9	52.4	62.1	64.1	48.0
Shaking hands with others	47.9	41.1	36.5	51.2	62.3	68.9	47.0
Exercising (yoga, gym, running, etc.)	50.8	40.8	33.3	51.3	62.1	63.1	46.4
Making career choices	47.3	35.2	33.8	50.7	61.5	61.2	44.3
Managing other medical diseases/illnesses	51.1	35.2	29.1	48.8	61.7	58.3	43.2
Going to barber, hairdresser, nail salon, etc.	49.5	36.9	33.8	48.6	61.1	62.1	44.5
Obtaining preventative medical procedures	48.6	35.7	30.2	47.9	61.0	57.3	42.9



^a A summary of responses including *often*, *very often*, and *all the time* are shown. Patients were asked how frequently vitiligo affected their decision to participate in daily activities (before the COVID-19 pandemic).

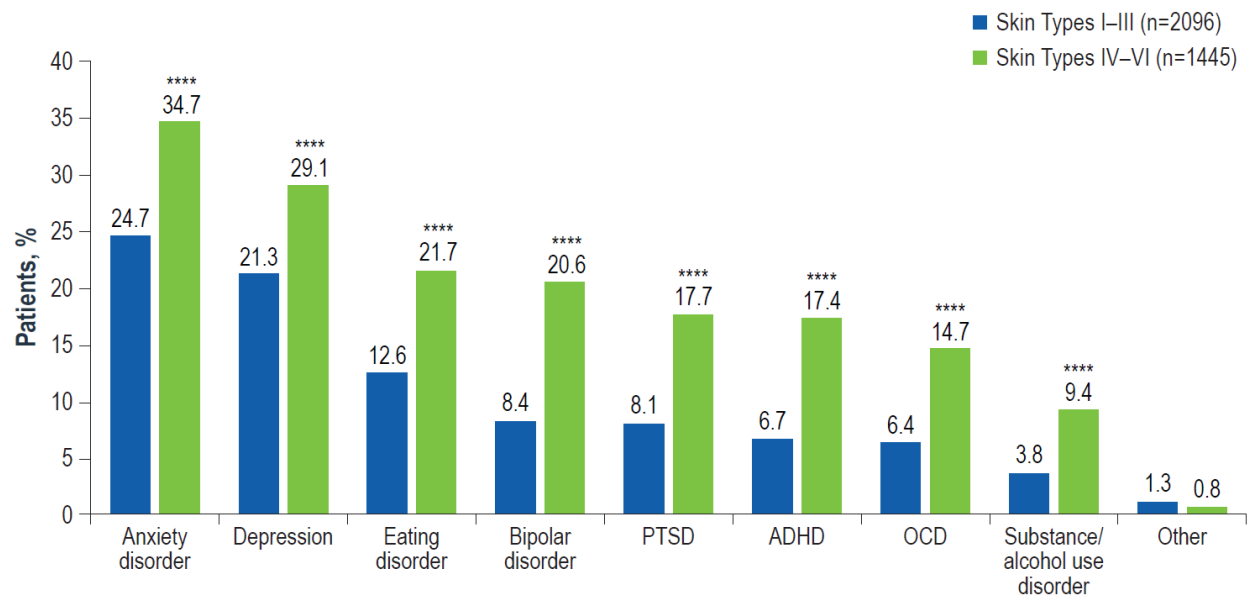
Figure S3. Perceived Impact of Vitiligo on Self-Esteem, Relationships, and Careers^a



^a Includes patients who responded to these questions with *agree* or *strongly agree*.

* $P < 0.05$ for Fitzpatrick skin types IV-VI vs I-III; **** $P < 0.0001$ for Fitzpatrick skin types IV-VI vs I-III.

Figure S4. Formally Diagnosed Mental Health Conditions Among Patients With Vitiligo



ADHD, attention-deficit/hyperactivity disorder; OCD, obsessive-compulsive disorder; PTSD, posttraumatic stress disorder.

**** $P < 0.0001$ vs Fitzpatrick skin types I-III.