

ORIGINAL ARTICLE

**MEN DO GET IT: EATING DISORDERS IN MALES
FROM AN ASIAN PERSPECTIVE**

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Abstract

Objective: To examine the clinical features of male patients with eating disorders in Singapore; and determine the differences in clinical features between the patients across the diagnostic categories. **Methods:** This is a database analysis of all male cases presenting to the Eating Disorders Clinic at Singapore General Hospital between 2003 and 2012. **Results:** 72 cases were identified; 36.1% were diagnosed with anorexia nervosa, 33.3% had bulimia nervosa and 30.5% had the diagnosis of eating disorder not otherwise specified. The mean presenting age was 19.9 years. 63.9% were heterosexual, while 15.3% were homosexual/bisexual. 61.1% had comorbid psychiatric diagnoses, with depression being the most common. 59.7% recorded premorbid obesity, while 66.7% reported excessive exercise. The patients in the various diagnostic categories had more similarities than differences. **Conclusion:** With more male cases over the years, it is important to further understand this condition, to better refine prevention, detection and treatment strategies. *ASEAN Journal of Psychiatry, Vol. 15 (1): January – June 2014: 72-82.*

Keywords: Eating Disorders, Males, Singapore, Anorexia, Bulimia

Introduction

Richard Morton published the first report on eating disorder in a male patient in 1689 [1]. Since then, others have also included male patients in their series. Gull acknowledged that anorexia nervosa does occur in males, in one of the first modern case series that described eating disorders [2]. His paper established the term anorexia nervosa in preference to *l'anorexia hysterique*, due to the presence of male patients, who in accordance with the custom of the time, could not be labeled as hysterical. Despite playing an instrumental role in shaping the history of eating disorders, males were ironically theorized out of existence in the 19th and early 20th centuries. Writers either opined that amenorrhea was pertinent for diagnosis or excluded males on the grounds of their atypical psychopathology, attributing their symptoms to other psychiatric disorders [3].

Over the years, understanding of eating disorders has improved. Interestingly though, these data predominantly – or even exclusively – relate to females. Given this backdrop, one could not help but wonder if the disparate female-male prevalence ratio in eating disorders, considered one of the most striking gender differences in psychiatry [4], was a reflection of the inherent nature of the illness, or the inevitable consequence of a lack of understanding and detection in male patients per se.

Historically, data [5] support a male/female ratio of approximately 1:10. Recently, emerging data have challenged this, indicating a ratio of 1:3 [6]. Collectively, these data suggest either a surge in the number of male eating disorders over the years, or a belated awakening in the psychiatry community about its existence. Taken either way, these studies underscore the pressing need to shed more

light on this illness in a much neglected demographic. To improve understanding, Carlat et al [7] compiled one of the largest case series to date, describing 135 patients. While this generated valuable information, the patients involved were mainly Westerners, limiting the generalizability of findings in the Asian context. This is of concern as the features in Asians may differ. Lee et al [8] described the absence of fear of fatness (“fat phobia”) in Hong Kong patients who attributed food refusal to rationales not related to fat phobia, commenting on the possible cultural differences in the manifestation of eating disorders in Chinese. Such conflicting data remain unresolved, as eating disorders, long considered a Western affliction or “culture bound syndrome” [9], continue to receive scant attention. Hitherto, the scarce literature on male eating disorders in an Asian context has regrettably been plagued by small sample size [10].

In this study, we hope to narrow the gap in knowledge by compiling the largest case series to date on eating disorders in Asian males, by studying the characteristics of these patients in Singapore. In addition, cases in each diagnostic category were compared with one another to determine if there were any differences in clinical features.

Methods

This is a database analysis, conducted within the Eating Disorders Programme in Singapore General Hospital, the country’s largest hospital and national referral centre. This study received ethical approval from the hospital’s Institutional Review Board. The Eating Disorders Clinic is the only specialist centre dedicated to the treatment of eating disorders in Singapore. On average, 8 to 9 new cases are seen monthly. Since its inception in April 2003, the Programme has evaluated 982 patients. The service helms the Eating Disorders Treatment Programme, available to both inpatients and outpatients. Diagnoses were established by psychiatrists according to DSM-IV-TR criteria⁽¹¹⁾. All males, evaluated between 1 April 2003 and 31 December 2012, and diagnosed with anorexia nervosa/bulimia nervosa/eating disorder not otherwise specified (EDNOS), were identified. Males with eating disorder-like symptoms arising in

the context of another primary psychiatric diagnosis were excluded.

Case notes were traced and reviewed. Information on the year of presentation, eating disorder diagnosis, demographic factors, family history of psychiatric illness, age at presentation, duration of symptoms, precipitating factors, presence of body image issues, admissions to inpatient facilities/outpatient treatment programs and clinical outcome were recorded. Outcome information is defined as the last known status of the patient at the point of case notes review; this was classified as full recovery, still on follow-up, transferred to another hospital for treatment, or defaulted. Literature was reviewed to identify gender differences in eating disorders. Most studies yielded few gender differences, except the following: excessive exercise [12], pre-morbid obesity [13], sexual orientation [14] and psychiatric co morbidities [15]. These variables were also abstracted onto a structured form.

Data analysis was carried out using Statistical Package for Social Sciences (SPSS) for Windows version 11.0 (Chicago, IL, USA) and SAS 6.2 (SAS Institute Inc, Cary, NC, USA) (for poisson regression). The data were summarized with the use of standard descriptive statistics and 95% confidence intervals for proportions. Sub-analysis evaluated for differences in clinical features between patients from the 3 diagnostic categories. Assumption of normality was tested using the Shapiro-Wilk test. Differences in continuous variables were determined by the Kruskal-Wallis test if they were not normally distributed. Association of categorical variables with the various groups was assessed using chi-square or Fisher’s exact tests. Two-sided p values less than 0.05 were considered statistically significant. To explore the strength of the results from the sub-analysis and estimate the risk of a type II error, power analysis was performed.

Results

A total of 80 cases presented from 2003 to 2012. Of these, 72 were diagnosed with an eating disorder. The diagnoses for the remaining cases were: major depressive disorder with comorbid generalized anxiety

disorder; social phobia; food phobia; obsessive compulsive disorder; and no mental disorder. As shown in Table 1, the ethnic make-up of the sample was: Chinese (76.4%), Malays (4.2%), Indians (9.7%) and Others (9.7%). All patients were single. They were mainly

students (41.7%) and national servicemen (41.7%). Most of the cases were referred from hospitals, with the rest being fairly distributed amongst the other sources of referral – self, primary care physicians, and private psychiatrists.

Table 1. Characteristics of patients

	Number	Percentage (%)
Marital status		
Single	72	100
Married	0	0
Divorced	0	0
Ethnicity		
Chinese	55	76.4
Malay	3	4.2
Indian	7	9.7
Others	7	9.7
Occupation		
Students	30	41.7
Employed	5	6.9
- Professionals	3	4.2
- Associate professionals and technicians	1	1.4
- Service workers/shop and market sales workers	2	2.8
	30	41.7
Unemployed	1	1.4
National service		
Not recorded		
Source of referral		
Self	9	12.5
Primary care	8	11.1
Hospitals	49	68.1
Others/private psychiatrists	6	8.3
Previous treatment for eating disorder	27	37.5
Family history of psychiatric illness	22	30.6
Identifiable precipitating event	64	88.9
Body image issues	49	68.0
Psychiatric comorbidity		
Major depressive disorder	23	31.9
Alcohol/substance abuse	7	9.7
Obsessive compulsive disorder	8	11.1
Anxiety disorder	3	4.2
Personality disorder	4	5.6
Self-harm/suicide	18	25.0
Sexual orientation		
Heterosexual	46	63.9
Homosexual	10	13.9
Bisexual	1	1.4
Not recorded	15	20.8
Pre-morbid obesity		
Yes	43	59.7
No	26	36.1
Not recorded	3	4.2
Excessive Exercise		
Yes	48	66.7
No	24	33.3
	Mean (years)	Standard deviation
Age of onset of symptoms	17.42	5.09
Age of presentation	19.93	5.56
Duration of illness prior to presentation	3.01	3.30

Anorexia nervosa was the most common diagnosis, followed by bulimia nervosa and EDNOS. Binge eating disorder accounted for 6.9% of the entire cohort. The mean age at first consultation was 19.9 years (SD = 5.56), while the duration of illness prior to presentation was 3.0 years (SD = 3.30). The average age of symptom onset was 17.4 years (SD = 5.09). 37.5% had not responded to prior treatment from other professionals. 88.9% identified a precipitating event for their illness, the most common being overweight and comments/teasing from others about one's appearance (data not shown). The majority of patients was heterosexual and reported pre-morbid obesity and excessive exercise. The commonest psychiatric comorbidity is major depressive disorder (31.9%). Notably, 18 (25.0%) of the subjects reported a history of self-harm or suicides.

Service utilization and clinical outcomes were also delved into. A total of 27 participants were admitted for inpatient stabilization at some point in their illness. 23 out of these 27 inpatients participated in the inpatient Eating Disorders Treatment Programme (EDTP), staying on average 7.26 weeks per enrolment. Outpatient programme was attended by 13 patients, with an average duration of participation at 5.7 weeks. The majority eventually defaulted treatment (48.6%), while those that continued to be on follow-up were 40.3%. 8.3% had recovered and discharged, while the rest (2.8%) were transferred to other treatment facilities, upon patient request.

Further analysis explored clinical differences between the various diagnostic groups (Table 2). These variables were determined *a priori*. 4 cases were omitted from analysis as they were missing some of the variables explored. A significant difference emerged in the length of

hospitalization ($\chi^2 = 14.40$, $p = 0.001$) and length of stay in the inpatient EDTP ($\chi^2 = 12.79$, $p = 0.002$) between the 3 groups. Males with anorexia were hospitalized longer compared to bulimia nervosa ($z = -3.06$, $p = 0.002$) and EDNOS ($z = -3.09$, $p = 0.002$) patients. Males with anorexia were in the inpatient programme longer than bulimia nervosa ($z = -2.42$, $p = 0.015$) and EDNOS ($z = -3.21$, $p = 0.001$) patients. There was a marginally significant difference in the total duration of stay in the inpatient and outpatient EDTP combined ($\chi^2 = 10.30$, $p = 0.006$). Further pair-wise comparisons revealed that males with anorexia participated in the EDTP for a longer period of time than did EDNOS males ($z = -3.06$, $p = 0.002$).

There was also a significant difference in excessive exercise amongst the 3 groups. Using a chi-squared test for independence (with Yates continuity correction), it was seen that males with anorexia exercised significantly more than males with EDNOS ($\chi^2 (1, n = 45) = 5.95$, $p = 0.015$, $\phi = -0.41$).

Power of the analyses conducted for the continuous variables (age at presentation and onset of symptoms, duration of illness at first presentation, number of psychiatric comorbidities, duration of inpatient admission, duration of participation of inpatient and outpatient EDTP) ranged from 0.7 to 0.85. In comparison, power of analyses for the categorical variables (ethnicity, sexual orientation, presence of psychiatric comorbidities, premorbid obesity, excessive exercise, presence of family history of psychiatric illness and previous treatment history for eating disorder) were all less than 0.50. The absence of any differences in the categorical variables could be due to type II error.

Table 2. Clinical differences across diagnostic groups (total sample size = 68)

Variable	Patients with AN (N = 25)		Patients with BN (N = 23)		Patients with EDNOS (N = 20)		Statistical Analysis	
	Mean	SD	Mean	SD	Mean	SD	χ^2	<i>p</i>
Age (years)								
At presentation	18.00	4.38	19.43	2.92	22.90	8.09	5.70	0.058
At onset	16.48	3.28	17.30	2.60	18.80	8.38	1.68	0.432
Treatment delay	1.84	1.95	2.83	2.53	4.65	4.82	5.31	0.070
Duration of inpatient admission (weeks)	4.84	6.16	1.17	2.66	0.95	2.06	14.40	0.001
EDTP (weeks)								
Total duration	4.80	9.09	1.48	2.71	0.65	2.30	10.03	0.006
Inpatient duration	2.58	4.20	0.78	1.83	0.25	0.91	11.46	0.003
Outpatient duration	2.04	5.02	0.70	1.82	0.40	1.39	4.46	0.108
Number of psychiatric comorbidities	1.00	1.08	1.39	1.34	0.90	0.97	1.55	0.46
	N	%	N	%	N	%	χ^2	<i>p</i>
Ethnicity								
Chinese	19	76.0	18	78.26	15	75.0	3.06	0.081
Malay	2	8.00	0	0	1	5.00		
Indian	1	4.00	3	13.04	1	5.00		
Others	3	12.0	2	8.07	2	10.0		
Sexual orientation								
Heterosexual	16	64.0	13	56.62	15	75.0	6.72	0.348
Homosexual	3	12.0	6	26.09	1	5.00		
Bisexual	0	0	1	4.35	0	0		
Unrecorded	6	24.0	3	13.04	4	20.0		
Presence of psychiatric comorbidities								
No	11	44.0	7	30.43	8	40.0	0.971	0.615
Yes	14	56.0	16	69.57	12	60.0		
Premorbid obesity								
No	11	44.0	5	21.74	10	50.0	4.17	0.124
Yes	14	56.0	18	78.26	10	50.0		
Excessive exercise								
No	4	16.0	6	26.09	11	55.5	8.292	0.016
Yes	21	84.0	17	73.91	9	45.5		
Family history of psychiatric illness								
No	16	64.0	17	73.91	15	75.0	0.833	0.659
Yes	9	36.0	6	26.09	5	25.0		
Previous treatment for eating disorder								
No	12	48.0	13	56.52	16	80.0	4.959	0.084
Yes	13	52.0	10	43.48	4	20.0		

EDTP: eating disorders treatment programme

Discussion

The deluge of eating disorders literature focusing the spotlight on female patients has long cast a shadow on males with the same affliction, relegating the latter to oblivion. In the minds of many, male patients are but a mere silhouette – sketchy, with hazy details; always around, but never really present –

millling around in the pool of patients with eating disorders, unobtrusive and unrecognised.

Our findings have helped to profile the male patient with an eating disorder: he is frequently detected from tertiary services, presenting in his late teens, after having wrestled with symptoms in the preceding 3 years. The typical male patient is single, heterosexual and has a history of obesity. He

reports body image issues and assuages his dissatisfaction by excessive exercise, after being triggered by comments on his weight. At the time of diagnosis, he is likely to have anorexia nervosa, and saddled with psychiatric co-morbidities, the most common being major depressive disorder. More often than not, he is not hospitalised for his condition or enrolled in the inpatient/outpatient treatment programmes. However, should the need arise, he is not averse to continuing treatment, spending up to 2 months in hospitalization or treatment programmes.

Taking into account the number of female patients who presented during the same period, the male to female ratio stands at 1: 12.5 (72 male patients versus 902 female patients). This mirrors the trend observed in Western countries [16]. Our patients are from a specialty treatment service and are unlikely to accurately represent the actual number in the community. At best, our numbers are a tip of the iceberg. True enough, data from the West affirm this. Male anorexia is deemed uncommon, with a female/male ratio of 10:1. However, the female/male ratio in a community sample [17] was 2:1 for anorexia and 2.9:1 for bulimia, when including partial syndromes.

Thus, the apparent gender disparity in eating disorders may be an inevitable consequence in the way eating disorders is originally defined, rather than a protective effect conferred by inherent bio-psychosocial differences in males. Scrutinizing DSM-IV TR criteria, it would not be wrong to conclude they were initially conceptualized with the typical female patient in mind. The core psychopathology that establishes a diagnosis of an eating disorder is the over-evaluation of shape and weight. In contrast to the unidirectional drive for thinness in women, body image concerns in men are more variable. These range from being concerned about being overweight and wanting to achieve a leaner ideal, to perceiving themselves to be under-developed and yearning to be “bigger” [18]. While these criteria have saliently distilled the essence of body image issues in females, they have completely sidestepped body image concerns that plague males.

Other diagnostic criteria also have limited clinical utility in identifying males with eating disorders. While long enshrined as the *sine qua non* for diagnosis in females, the requirement of amenorrhoea renders the current diagnostic system *non sequitur* when applied to men.

Nosological gender bias is also inherent in the diagnostic criteria for bulimia nervosa. The most vociferous of criticisms have been levelled at the definition of a binge, which is “(1) eating, in a discrete period of time, an amount of food that is definitely larger than most people would eat ... (2) a sense of lack of control over eating during the episode”. It was shown that men freely acknowledge frequent consumption of large quantities of food [19] but tended not to label this a binge. This is possibly attributable to bingeing being more socially sanctioned for men, leading them to consider bingeing episodes as normal [20]. Furthermore, men experience less “loss of control” in relation to binge eating, which directly affects eating disorder diagnosis.

Feminisation of the disorder may lead to late detection or treatment-seeking amongst males. Results from our study endorse this notion. On average, the male patient in Singapore reports 3.0 years of untreated illness, longer than females [21] (26 months). Though we did not specifically set out to account for the delayed presentation, the finding that the males were mostly referred from tertiary services hint at the diagnostic challenges involved. It is possible that the male patient has to be navigated through the pathway of health care services from primary care eventually to tertiary care, before being sited appropriately in a psychiatric service. This stands in stark contrast to findings from Lee et al, where the sources of referral for the female subjects were fairly evenly distributed amongst the various health care sectors. Similar findings apply to studies involving bulimia nervosa [7].

Our finding that there is an overall delayed presentation in males implies that the diagnosis does not occur until the problem is well-entrenched or has reached dangerous proportions. Bramon-Bosch et al⁽¹⁵⁾ has gone so far to speculate that eating disorders are only diagnosed in males when significant psychiatric comorbidity is present. While

methodological limitations forbid such a conclusion, we did find high psychiatric comorbidity in males. Again, using Lee's study as a basis for comparison, 61.1% of male patients in Singapore had psychiatric comorbidity, much higher than the 31.7% in females [21]. Research elsewhere yielded mixed findings: males with bulimia were similar to females in rates of comorbid psychiatric disorders (such as mood disorders, anxiety disorders and personality disorders), except substance abuse [22]. Other psychiatric comorbidities include psychosis and suicidal behavior.

The high rate of premorbid obesity in our study was replicated in several other studies [4]. This is best explained by research showing that weight concerns were more strongly associated with a high BMI in boys than in girls [23]. However, it remains unknown if the relationship between obesity and eating disorders is causal or associative in nature. This is because it is difficult to establish if disordered eating is the basis for both obesity and eating disorders, independently leading to both entities, thereby creating a spurious association between them, or if obesity actually causes eating disorders by lowering an individual's threshold for initiating disordered eating practices.

It was hardly surprising that most of our cases (68.1%) reported body image issues, considering evidence that established that individuals with body image concerns are at increased risk of disordered eating [24]. Still, there exists an ample body of evidence that suggests otherwise [25]. The conflicting results could be due to: (1) the phenomenon of body image and its manifestations are conceptualized differently in each study; (2) different tools were used to assess body image, precluding comparison of findings across studies [26]; (3) present assessment tools were only specific enough to measure drive for thinness but not adequately sensitive to identify the entire spectrum of men with body image concerns [27]. Sociocultural factors were frequently highlighted to explain the rising tide of discontent in body image in males. Cultural norms of the ideal male body have become increasingly muscular, from men's magazines to even action figurines [28].

The high rate of excessive exercise in our sample concurs with findings elsewhere [29]. Compared to other compensatory mechanisms such as self-induced vomiting, exercise serves the dual purpose of managing unnecessary weight gain and increasing muscle bulk, hence better addressing the underlying the myriad of body image issues in males. It is also a more culturally acceptable means for males [30]. Depression was also commonly observed in patients who exercised excessively. Our findings also point towards this trend. Anderson et al [31], though, observed no gender differences in excessive exercise. They reasoned that exercise is the only compensatory behaviour that allows for the possibility of a bi-directionality of outcome with respect to weight and shape. In other words, just as males are likely to endorse exercise for weight gain, females are similarly inclined to favour it for weight loss. Central to the inconsistent findings lies the varying definition of excessive exercise. Most researches did not clearly defined excessive exercise, or differed in the elements used in their specifications.

Though data on the sexuality rates of the population in Singapore is not available, our finding of 13.9% of homosexuals or bisexuals in the sample is congruent with previous literature on other populations [32], and suggests the link between homosexuality and male eating disorders. One possible explanation is that gay/bisexual men are particularly affected by cultural notions of beauty, as men in general tend to place more emphasis than women on physical attractiveness in their evaluation of potential partners [33]. They are also more likely than heterosexual men to view their bodies as sexual objects, and therefore, like heterosexual women, may be more vulnerable to experiencing body dissatisfaction [34]. The plausibility of these explanations notwithstanding, the association between homosexuality and male eating disorders remains questionable. Being stereotyped as a "feminine" disorder, heterosexual males may be hesitant to admit to having the condition, as doing so would be a direct affront to their masculinity. On the other hand, homosexual men experience more psychosocial stressors, lowering their threshold to seek help.

Our study is one of the few to evaluate service utilisation in males with eating disorders. A significant proportion was not hospitalised (62.5%) or enrolled in the inpatient/outpatient treatment programmes (68.1%). It is unlikely that they were less ill to necessitate further intervention, given that this cohort of patients was established to have more psychiatric comorbidities to begin with. Rather, the reason appears to be the relative unwillingness in males to seek help. Besides the stigma that eating disorders are a female phenomenon, other obstacles help-seeking include the belief that the treatment setting is predominantly helmed by a “feminist treatment philosophy” [35]. Qualitative research has commonly elicited from most male sufferers the desire to be treated like a man [36].

This calls for a gender specific approach in treatment. As research on a specific programme for men is still in an exploratory stage, it may be premature to extensively develop such services, especially when the absolute number of male patients is inadequate to overcome logistic constraints. Until more information is available, treatment services could start by striving to be more gender sensitive, rather than aim to be gender specific.

Despite relatively lower rates of service engagement amongst males, our study showed that, for those who ultimately do, the duration of engagement is up to 2 months long. Research elsewhere shows that the mean number of inpatient days and average cost of inpatient treatment is similar for both genders [37]. For outpatient treatment though, females showed greater utilisation, in terms of duration and costs. With research in this aspect pretty much in its infancy, it may be worthwhile exploring factors that lower males’ resistance for service engagement, and reasons motivating them to stay on in therapy.

With treatment needs unknown and unmet, the outcome data for men is heartening nonetheless. Empirical research suggests no reason to expect a differential or worse outcome for male eating disorders, in terms of response to treatment and prognosis [38].

Carlat et al [7] established the following 1-year follow-up data: 22% had full recovery, 19% partially recovered and 59% continued to

suffer their full eating disorder syndrome. Our data tracked patients over a longer duration and showed that 8.3% fully recovered, 40.3% were still symptomatic, 48.6% defaulted and 2.8% requested to seek treatment elsewhere. While the duration of follow-up and definitions of treatment outcomes in our study differ from Carlat’s, it would be safe to deduce that outcomes in men are likely to be more favourable than described. This is because recovery in eating disorders typically takes years to achieve. Given the relatively short duration of follow-up, and that most patients presented only towards the end of the study period, it is possible that most of them would lack sufficient time to be adequately treated to achieve full recovery. Also, some of those who defaulted may have eventually recovered with time too. Current figures could well underestimate actual recovery rates in men and suggest that the prognosis of eating disorder males could be more favourable than it currently is.

To better help these patients, existing treatment recommendations need not be eschewed, but honed further. For example, psychological interventions could do more to address issues such as stigma and gender identity, arising from being afflicted with a “woman’s disease”. The therapeutic milieu could be enhanced by engaging more male staff, to facilitate group therapy discussions on male concerns. Physical recovery could also be aided with nutritional rehabilitation that is more sensitive to the dietary demands unique to the male body.

Limitations

Being a retrospective study, the quality of the data depended on how thoroughly documented the case records were. Accordingly, sexual orientation was not elicited or recorded in a significant proportion of cases, presumably omitted owing to the sensitive nature of such queries. This impacts the accuracy of rates of sexual orientation in the sample. There may also be recall bias. With preoccupation with weight a symptom of their illness, the patients may more readily report a history of premorbid obesity than a normal person would.

As the cases were identified at a tertiary care institution, their conditions might have been more serious than those managed elsewhere.

Finally, the use of a case series precludes direct comparison with unaffected individuals or female patients, nor does it allow an assessment of the true prevalence and incidence of male eating disorders.

Conclusion

This is the first known study that describes male eating disorders in an Asian context. It provides fresh insights into clinical characteristics of eating disorder patients, and with its focus on Asian males, adds a new dimension to better refine the definition of this condition.

The typical male Asian patient profiled here mirrors the one sketched in existing literature based on the Western population. Taken together, these findings provide a better understanding of male eating disorders, and platform to guide prevention, detection and treatment strategies for this group of patients.

Disclosure of Conflicts

None

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