

Implications of Historical Evidence for the Classification of Eating Disorders

A dimension overlooked in DSM-III-R and ICD-10

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Successive editions of the ICD and DSM classification systems have exercised a major influence over contemporary diagnostic practice and perceptions of the form and structure of disorders. Periodic revision has been based on clinical and epidemiological research, and minimal attention has been given to any possible contribution from historical evidence. To test the potential value of such evidence, the historical manifestations of four eating disorders (anorexia, bulimia, rumination and pica) were considered in relation to the clinical descriptions and diagnostic criteria of DSM-III-R (American Psychiatric Association, 1987) and ICD-10 (World Health Organization, 1992). For each disorder, evidence is presented of continuities and discontinuities with the phenomena recognised currently. Instances of symptom overlap between disorders and the implications of the historical findings for some current classificatory issues are discussed. When spread over several centuries, case numbers remain relatively small, the amount of clinical detail is highly variable, and temporal distribution is uneven. The conclusions that can be drawn, therefore, are necessarily somewhat tentative and subjective.

Historical analysis

Anorexia

Evidence now exists of recognisable historical antecedents of anorexia nervosa, described, almost simultaneously, by Lasègue (1873) and Gull (1873), if broad definitions are adopted of food avoidance of nervous origin without ascertainable organic cause, or of sustained abnormally low body weight. Data were derived from 360 cases of self-inflicted fasting, covering the period 1500–1939, identified by screening an extensive range of printed and manuscript sources in Europe and the USA and by a postal survey of British record offices.

A descriptive approach to the classification of the cases, according to the predominant form of presentation, generated the following groupings:

insanity; suicide; hunger strike or stunt; health cure; religious or supernatural; imposture; professional exhibitionism; abnormal attitude to food, eating or weight; miscellaneous; unclassifiable. Cases in the category of “abnormal attitude to food, eating or weight” formed the largest subgroup in each century. Of these, a striking 85% were female, and three-quarters were under 30 years of age; in fact, over half were aged under 20 at the time fasting or low weight was reported. Most subjects were unmarried. Findings in relation to this subgroup of 179 cases, therefore, were analysed in detail owing to their possible relevance to anorexia nervosa.

Features of this subgroup provided substantial evidence of continuities with some of the characteristics seen in modern anorexia nervosa, namely an overwhelming predominance of females in the pubertal, adolescent or young adult age-range, with some evidence of body shape concern and “fear of fat”, and with frequent reporting of amenorrhoea. Some bulimic episodes and devious food-related behaviours occurred, including fraudulent claims of surviving without eating, and there were instances of fasting presenting as an ascetic form of self-denial. A trend visible in some 19th-century female abstainers was antipathy towards meat and its progressive elimination from their diet, a feature which continues to operate in 20th-century anorexia nervosa, to which vegetarianism is sometimes a prelude and a continuing method of intake control. Stressful precipitating events included physical illnesses, bereavement, emotional disturbances, unhappy love affairs and frights. There was considerable variability in course and outcome of the illness among the historical fasting subjects, ranging from recovery (spontaneously or following treatment) to chronicity and, occasionally, fatality. Among the sustaining factors were the aura of the fasting identity, the psychological and material benefits of invalidism, the acquisition of control over family and environment, and the stimulus of public curiosity about prolonged abstinence, features which are still applicable in anorexia nervosa. An ambivalence of attitude towards the fasting subject was displayed historically by both physicians and the

general public, on a parallel with that sometimes shown in relation to 20th-century anorexic patients.

There were, however, notable discontinuities. Over time, there was a changed explanation for the fasting behaviour; its attribution to divine or supernatural intervention gave way to rational and medical theories during the process of secularisation. Of particular interest was the complete lack of evidence of body-image distortion among the historical subjects. In contrast with present-day anorexics, overactivity was rarely described, and self-induced vomiting was exceptional. There was no reported use of either purgatives or diuretics specifically for weight reduction, and the fasting objective varied from subject to subject and was never stated to be weight loss *per se*. Public exhibitionism was exploited, morally and materially, based on exorbitant claims of a capacity to survive without food; this stands in stark contrast with attempts by modern anorexics to convince onlookers of the adequacy, even the superfluity, of their intake. The very limited number of pre-adolescent historical cases also shows marked divergence with the increasing incidence of pre-pubertal anorexia nervosa in the late 20th century, especially among young boys (Fosson *et al*, 1987).

Symptom overlap with other eating disorders was discernible in some cases. Abstinence punctuated by bouts of excessive intake occurred occasionally, demonstrating some overlap with bulimia. Excessive craving for certain foods, non-foods and low or non-nutritive substances, amounting to a form of pica, featured in some of the abstainers. There was no evidence of overlap with rumination in this subgroup of historical subjects, although rumination has been reported, occasionally, in current anorexic patients.

There is one notable implication for modern diagnostic criteria. Although there was firm historical evidence of concern for appearance and shape in young females as early as the 17th century, and sporadic indications, particularly in the late 19th century, of fears of becoming fat (the latter being a criterion common to both DSM-III-R and ICD-10), no evidence of body image distortion emerged, within the period examined, terminating in 1939. This suggests that care should be taken not to overemphasise the diagnostic importance of an individual feature, assuming paramount importance at any given time, which may turn out to be relatively short-lived in historical terms. Such changes in the presenting form of a disorder over time are often identifiable only by taking a longitudinal historical approach (Parry-Jones, W. Ll., 1985).

Bulimia

References to the disorder of bulimia, encompassing many variant terms (Parry-Jones, B., 1991), are traceable in Western European sources for over two millennia (Parry-Jones & Parry-Jones, 1994). Throughout this period, "bulimy" denoted an insatiable voracity, morbid or canine appetite, with or without vomiting, accompanied by various other symptoms including syncope. Sometimes, cravings for offensive or non-food items were exhibited. Although general discussions about bulimia feature quite commonly in the literature, actual case reports are rare. Observations here are based on the examination of 40 cases, derived from printed sources, from the sixth century onwards (Parry-Jones & Parry-Jones, 1991, 1994).

A number of clear continuities existed between features which occurred in the historical bulimics and those seen in present-day patients with bulimia nervosa (Russell, 1979). There were some examples of eating patterns alternating between gorging and abstinence, or gorging interspersed by periods of normal or reduced intake. As is the case currently, most of the historical subjects presented at normal weight; a few were underweight or emaciated and only rarely was body weight excessive. There was occasional evidence of the presence of neurotic traits, lowered mood, vigorous exercising, avoidance of shared family meals, secret eating and night bingeing. References to vomiting (bulimia emetica) were frequent, but this was never stated to have been self-induced. Four of the historical cases were self-mutilators, and one of these, a female, exhibited most of the risk factors currently considered to be significant to the onset of self-injury, namely parental loss, serious childhood illness, physical and sexual abuse, violence and body alienation. This patient also displayed the same pattern of seasonal variation in the severity of her bulimic episodes over a ten-year period (Parry-Jones & Parry-Jones, 1993).

The discontinuities were even more fundamental. Males predominated among the historical bulimics, and age at onset varied from childhood to middle age. These findings contrast sharply with the high female incidence and predominantly young adult age range in modern bulimia nervosa. Infestation by intestinal worms or debility during convalescence were among the acknowledged precipitants. Cravings for raw fish, meat and offal, perverted appetite for non-foods, such as grass, thistles and tallow candles, and excessive nocturnal and gustatory sweating were reported historically. There was a complete absence of any evidence of self-induced vomiting or abuse of either purgatives or diuretics. There was no

intimation of concern by the historical subjects regarding body weight or shape, or of fears of loss of control over food intake.

Symptom overlap was discernible with all three of the other eating disorders. Some of the historical bulimics exhibited cyclic variation between over-eating bouts and periods of fasting, or of reduced or normal intake. Excessive cravings for specific foods and the over-consumption of non-foods or offensive commodities amounted, in some instances, to a manifestation of pica (Parry-Jones & Parry-Jones, 1992). Certain characteristics in the eating behaviour of some of the bulimic subjects, particularly over-rapid consumption and inadequate mastication, constituted core features of rumination disorder.

The implications of these findings are considerable. Before acquiring syndromal status in ICD-10, bulimia was categorised in ICD-9 simply as "polyphagia, excessive eating or hyperalimentation" implying, as had been the case for centuries, a symptom, or a variable group of symptoms, rather than a discrete disorder. Although the symptom of bulimia (i.e. gorging) remains the central feature in current diagnostic classification of bulimia nervosa, additional criteria have been introduced, and only some of these appear to have been present in the group of historical subjects under consideration. The most striking finding is the absence of pre-occupation with body shape and weight, or of deliberate measures to mitigate weight gain, or of any expression of lack of control over food intake. Such negative evidence emphasises the effects of morphological change over the centuries, since the historical disorder of bulimia bears little consistent resemblance to modern bulimia nervosa.

Rumination

Rumination, or merycism, is a rare disturbance of gastric or oesophageal function, first described by the Italian anatomist, Fabricius of Aquapendente (1618). Dual strands of physical and mental rumination are traceable in English-language sources from the 16th century onwards. In the physical disorder, a bolus of food is regurgitated into the mouth, without nausea, and subjected to a second pleasurable mastication. The remasticated mass is usually re-swallowed, but sometimes ejected, resulting in moderate to severe nutritional deficits. The process was perceived, initially, as an atavistic analogy to the rumination of herbivorous animals. The two earliest case reports emphasised familial bovine characteristics, such as horny forehead excrescences. There have been few systematic studies of human rumination, and minimal attempt at historical interpretation.

Approximately 90 published cases of rumination from the 17th to the early 20th century were examined (Parry-Jones, this issue, pp. 303–314). Precise figures are difficult to obtain, owing to ambiguities and overlap in some sources and the tendency towards data presentation in relation to homogeneous groups of ruminators, such as infants and the mentally retarded.

One of the most obvious continuities observed is the association between rumination and mental retardation. From 1685 onwards, and with increasing frequency following the acceleration of institutionalisation during the 19th and early 20th century, the occurrence of rumination in mental retardates was reported. The same range of predisposing factors applied to both historical and modern ruminators: neurotic traits, rapid food consumption, poor mastication, physical abnormalities of the stomach and oesophagus, and psychological difficulties. The course of the disorder, historically and currently, could be transient, episodic or lifelong. It could have either a 'benign' or a fatal outcome, depending on the degree of nutritional impairment, and the condition could be voluntary or, more often, involuntary.

A number of important discontinuities emerged. Although the pre-20th-century historical cases comprised adults and juveniles, both mentally retarded and of normal intelligence, from 1907 onwards rumination was recognised in infants and, currently, it is categorised specifically as a feeding disorder of infancy and childhood. Furthermore, while historically males outnumbered females, the sex ratio at the present time is said to be equally divided in infants, but, in adults, weighted in favour of males, particularly among the mentally retarded. As already indicated, there is clear historical evidence of predisposing factors, although DSM-III-R states that there is no information on this subject. It is also possible to identify distinct familial patterns in incidence, such as descent through the male line within certain families, and the recurrence of the disorder in several generations of the same family (Brockbank, 1907). The historical cases indicate, moreover, that there was a much wider age range among ruminators, from infants to octogenarians.

Any historical suggestion of symptom overlap between rumination and anorexia is limited to the somewhat inconclusive reference by Peyer (1685) to a ruminating adolescent girl, who, in contrast to most ruminators, 'ate sparingly'. Such an interpretation is given greater feasibility, however, in the light of occasional modern reports of rumination in anorexia nervosa (Thoma, 1967; Larocca, 1988). In contrast, rumination disorder incorporates many affinities

with bulimia, providing several examples of symptom overlap with the latter. Both conditions regularly involve ravenous, over-rapid intake with inadequate mastication. Inevitably, connections have been made between bulimia, rumination and gluttony (Bourneville & Séglas, 1883), fostering the historical perception of both these disorders as forms of degenerate behaviour. This, in turn, has contributed to the secretiveness, social embarrassment and social impairment that has dominated the lifestyle of many bulimics and ruminators from the 17th century to the present (Peyer, 1685; Wilson, 1840; Brown, 1968; Blinder, 1986), having the unfortunate effect of making any accurate estimate of incidence difficult. Recent studies (Fairburn & Cooper, 1984; Larocca & Della-Fera, 1986; Williamson *et al*, 1989) continue to provide evidence of symptom overlap between rumination and bulimia. Dental complications and parotid enlargement, for example, due to regurgitation and self-induced vomiting, have been common to both disorders during the 19th and 20th centuries.

Historically, both rumination and bulimia were heavily male oriented, in contrast with the female dominance in current bulimia nervosa and the allegedly equal distribution of rumination between male and female infants in DSM-III-R. Kanner (1936) listed only ten females in the first 145 published cases of rumination.

Another example of the overlap between rumination and bulimia was the way in which some ruminators and bulimics used their spectacular eating abnormalities to earn their living as exhibitionists in fairs, circuses or side-shows. During the early 19th century, rumination was widely viewed as a form of dyspepsia or indigestion. Subsequently, Sinkler (1898) described it as a gastric neurosis "allied to nervous vomiting", and Allbutt (1897) classed it with bulimia under "neuroses of the stomach". Both disorders became popularly regarded as digestive abnormalities with accompanying neurotic or hysterical traits.

Symptom overlap with pica was much less obvious, although rumination in infants can be construed, like the pica of young children, as an attempt to recreate orally the gratification inadequately provided in the mothering context, or, among mental retardates, as a method of relieving boredom and under-stimulation. Kellogg (1897), for example, commented on the role of pica for non-food items as a potentially life-threatening feature of rumination in feeble-minded subjects.

When the classificatory implications of these findings are considered, current diagnostic criteria appear to be conflicting and inadequate. DSM-III-R regards rumination as a separate eating disorder, but

limits it to infancy. In ICD-10, it is simply included as an occasionally associated condition, under "feeding disorder of infancy and childhood". However, the historical evidence, backed by modern research (Mayes *et al*, 1988), suggests that there is a need to acknowledge the existence of adult and juvenile ruminators, both mentally retarded and of normal intelligence. Prevalence is almost certainly higher than the "apparently very rare" attribution in DSM-III-R.

Pica

Pica has been known consistently for two millennia as a manifestation of false or craving appetite, the deliberate ingestion of a bizarre selection of food, non-nutritive substances and non-food items. The term was used in the English language as early as the mid-16th century by Gale (1563), referring to pregnant women and young children eating coal. A consistent historical theme has been the recognition that some of the substances consumed regularly by young girls, such as lime, coal, vinegar and chalk, were selected for cosmetic reasons to produce a pale complexion and to look attractive. Calmette (1706) was among the earliest to attribute a psychological explanation to the pica of adolescent girls, whose ideas of beauty were influenced by the unusual eating behaviour of some of their female peers (Parry-Jones, B., 1992). About 90 individual cases of pica were located from the 17th to the early 20th century, supported by a considerable volume of general discussion and observations in relation to well defined pica-prone populations, such as young children, pregnant women, chlorotic girls, geophagists, the mentally ill and the mentally retarded.

A number of continuities can be identified in pica presentations. The main populations exhibiting the disorder historically were pregnant women, young children, the mentally retarded and geophagists in primitive tribal societies, and this remains the case at the present day. Some pica substances occur frequently, such as coal, ice, chalk, plaster, earth and clay. In the case of young children, the sought-after ingestae remain limited, effectively, to materials within their grasp, such as flakes of paint gnawed off furniture, cloth fragments, hair, sand, soil and leaves. Intestinal worm infestation has been a regular concomitant of pica, especially among geophagists. The most important findings, however, have been the common association of pica with iron-deficiency anaemia in a significant number of sufferers, and the effectiveness of therapeutic doses of oral and parenteral iron in eliminating pica.

In terms of discontinuities, although historically females heavily outnumbered males, during the 20th century the distribution of the disorder between the sexes is much more even (excluding pica of pregnancy). While pica is regarded, at present, principally as a condition presenting in young children, if pregnancy and mental retardation are excluded, it occurred in previous centuries with considerable frequency in adolescent or young adult females of normal intelligence, often accompanied by chlorosis, with its characteristic pallor and iron deficiency. The pica displayed by these chlorotic girls, often in the context of aversion to normal foods, usually focused on unusual substances such as pepper, nutmegs, plaster and raw corn, which were chiefly non-foods or non-nutritive items. This contrasts with some 20th-century pica manifestations, which involve excessive consumption of foods, particularly fruit and vegetables, rather than bizarre substances.

Some historical presentations of pica demonstrated definite symptom overlap with anorexia nervosa, incorporating ploys amounting to dietary restriction. These centred on abnormal food selection, aversion to normal foods, or the frequent consumption of ice or iced water (Parry-Jones, B., 1992), lemon juice and vinegar, the latter two having weight-reducing properties. In juvenile pica, the frequent selection of crunchy or chewy objects (e.g. cinders or leather), allowing prolonged nibbling or slow mastication and providing distraction from the lack of normal food intake, has parallels with the mouthing and sucking of items such as nuts, grapes or raisins, which were usually spat out afterwards, in historical cases of anorexia. There was occasional overlap with bulimia in instances when the pica incorporated a morbid desire for excessive quantities of a particular food. It is interesting to note that a recent study of early childhood eating behaviours and adolescent eating disorders (Marchi & Cohen, 1990) has indicated that pica in childhood constitutes a prospective risk factor for the development of bulimia nervosa in adolescence. Pica and rumination have shared a common feature in relation to young children and mentally retarded subjects, in that both disorders may be interpreted as a form of self-stimulation in response to nurturing or environmental deficiencies.

The implications are important for current diagnostic criteria, which lack consistency regarding the status of pica. The condition, accorded full eating disorder status in DSM-III-R, is limited to young children, persons with mental retardation and pregnant women, and is said to be rare in normal adults. On the other hand, in ICD-10, pica is described as a disorder of infancy and childhood,

featuring among a "miscellaneous group of behavioural and emotional disorders with onset usually in childhood and adolescence", except for a passing reference to "pica of nonorganic origin in adults", itemised under the heading of "other eating disorders".

Historically, the prevalence of pica appears to have been higher than at present, particularly in chlorosis, although it is likely that the incidence of pica is currently higher than the number of published case reports suggests, due to concealment or failure to recognise the abnormality of the eating behaviour. In this context, DSM-III-R describes pica as rare in normal adults, and ICD-10 contains no information about incidence. The historical evidence also implies that the age range of subjects was much wider and that females greatly predominated over males. Although DSM-III-R states that there is no information about familial patterns, the historical cases provide evidence of traditions of geophagia in primitive societies, passing down through successive generations and relating to specific groups, such as pregnant or lactating females. There are also familial patterns in chlorotic pica, with examples of consecutive mother-child or multiple sibling pica, for the same or for different substances. DSM-III-R also claims that there are "no regularly associated features", although iron deficiency is clearly associated.

As currently defined, in both classifications, pica does not include excessive cravings for certain food items, as well as for non-nutritive substances. Further, close connections between pica and anorexic and bulimic manifestations are not acknowledged. Cullen (1780) grouped pica with bulimia, perceiving the two disorders as variants of aberrant appetite, governed respectively by quality and quantity of the ingested substances. The nosological status of pica, however, has posed persistent problems and it remains unresolved whether it constitutes a symptom or whether it merits elevation to the separate eating disorder status accorded to it in DSM-III-R (Parry-Jones & Parry-Jones, 1992).

Conclusions

It is evident that the eating disorders considered have presented in various forms, characterised by the changing prominence of different features, the assumption being that the process has been influenced, to some extent, by prevailing sociocultural factors. When viewed from a historical perspective, modern versions of these disorders begin to assume less finite characteristics and the differentiation between disorders is sometimes less distinct. It is interesting to consider the pragmatic implications of these findings in relation to the way in which classified disorders are

construed. Despite their limitations, current classification systems fulfil an essential utilitarian function for clinical, research and education purposes, but there are dangers in their over-rigid application. Although the use of variable historical data imposes its own restrictions and limitations, and there are numerous methodological and interpretational problems, there is a strong case for historical data to receive consideration in future revision of the classification of eating disorders.

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