An important review [31] of chronic pelvic pain in women dismantled the notion that women without relevant physical findings differ in psychological characteristics from women with relevant physical findings. Women with pelvic pain often have other non-pain somatic symptoms and current or lifetime anxiety and depression disorder [22]; they may have a history of physical or sexual abuse in childhood; but this is of unclear significance. Studies should avoid interpreting the absence of physical findings as evidence for psychological origins of the complaint ('psychosomatic' or 'somatoform' disorders). Pain studies describe multiple processes by which pain may spread across sites, or in time, including central sensitisation (see previous section), viscero-visceral cross sensitisation in relation to multiple pain sites [70], activation of the hypothalamic-pituitary axis and dysregulation of serotonergic pathways [71] that can render pain levels responsive to stress. Some pain problems which affect sexual activity are diagnosed as sexual problems (e.g., 'dyspareunia') when pain is the central problem and is not contingent on sexual activity alone [72]. Better integration of sexology and mainstream psychology for pelvic pain in both men and women is needed, building on a biopsychosocial formulation [73, 74].

The term psychosomatic symptoms can best be understood as multiple somatic symptoms not associated with, or indicative of, any serious disease process. Medical and surgical history may also be important [75].

Understanding the psychological components of pain

Psychological processes of emotions, thought and behaviour involve distributed networks, whose interactions with pain processing are complex, producing inhibition and facilitation of signal processing, appraisal, and response. Models that integrate psychological factors involved in maintaining persistent pelvic and urogenital pain with current neurobiological understanding of pain are few, but the quality is high (see Section 3.1.5.1).

There is no evidence that women with CPPPS without physical findings are primarily presenting a psychological problem [31]. Anxiety and post-traumatic stress symptoms are common in some women with CPPPS [23, 76] and with vulvar pain [77], and may account for substantial variance in health status, treatment use and treatment outcome; for instance, women's expectations about vulvar pain on penetration predicted pain, sexual function and sexual satisfaction [78]. Negative investigative findings do not necessarily resolve women's anxieties about the cause of pain [79, 80] and anxiety often focuses on what might be 'wrong'. Depression may be related to pain in various ways, as described above. Until measures are available that are adequately standardised in patients with pain, assessment of anxiety and distress requires questions about the patient's beliefs about the cause of pain, the hope that diagnosis will validate pain, the struggle with unpredictability, and the implications of pain for everyday life [81, 82]. Reference to the studies of the IMMPACT group [83] is recommended for guidance on outcome measures suitable for pain trials.

Stress can modify the nervous system to produce long-term biological changes. These structural changes may be responsible for significant early life and adverse life events which are associated later with chronic pain syndromes [33]. The patient should be asked about adverse life events that may produce these biological responses and affect general psychological well-being [33, 84].

3.1.5.3 Clinical paradigms in visceral pain

Referred pain

Referred pain is frequently observed and its identification is important for diagnosis and treatment. Referral is usually somatic to somatic, or visceral to somatic. However, there is no reason why pain cannot also be perceived within the area of an organ with the nociceptive signal having arisen from a somatic area. Referred pain may occur as a result of several mechanisms but the main theory is one of convergence-projection. In the convergence-projection theory, afferent fibres from the viscera and the somatic site of referred pain converge onto the same second order projection neurons. The higher centres receiving messages from these projection neurons are unable to separate the two possible sites from the origin of the nociceptive signal [63].

Hyperalgesia refers to an increased sensitivity to normally painful stimuli. In patients that have passed a renal stone, somatic muscle hyperalgesia is frequently present, even a year after expulsion of the stone. Pain to non-painful stimuli (allodynia) may also be present in certain individuals. Somatic tissue hyperaesthesia is associated with urinary and biliary colic, IBS, endometriosis, dysmenorrhoea, and recurrent bladder infections. Primary vulvar pain syndromes are examples of cutaneous allodynia that, in certain cases, may be associated with visceral pain syndromes, such as BPS. Referred pain with hyperalgesia is thought to be due to central sensitisation of the converging viscero-somatic neurons. Central sensitisation also stimulates efferent activity that could explain the trophic changes that are often found in the somatic tissues.