

Study	Country	Focus	Design	Sample	Measures / Format	Results
Anger et al. (2011)	USA	Quality of life (QoL)	Qualitative	N = 33 female clinic patients with OAB  Mean age=67	Focus Group	<p>Women reported an impact of OAB on their QoL – the most impact on travel away from home and nocturia. As result, affected choice of social activity (e.g. no cinema).</p> <p>Women reporting nocturia also reported chronic sleep deprivation and fatigue during the day.</p> <p>Women reported self-blame for their condition, and that incontinence episodes reflected a ‘psychological weakness’.</p>

Bunyavejchevin (2006)	Thailand	QoL	Cross-sectional	<p>N = 420</p> <p>postmenopausal women</p> <p>OAB: n=120</p> <p>Stress urinary incontinence (SUI): n=120</p> <p>Mixed urinary incontinence (MUI): n=60</p> <p>Healthy controls: n=120</p>	SF-36	<p>OAB reported significantly worse QoL scores in all domains than controls (p&lt;0.05).</p> <p>OAB reported significantly worse QoL scores than SUI in all domains except physical health (p&lt;0.05).</p> <p>OAB reported significantly worse QoL score than MUI in physical and general health, vitality, emotion and mental health domains (p&lt;0.05), but significantly better QoL than MUI in pain and social functioning.</p>
Bunyavejchevin & Veerananarapanich (2005)	Thailand	QoL	Cross-sectional	<p>N = 180</p> <p>postmenopausal</p>	SF-36	<p>OAB reported significantly worse QoL scores than controls on all</p>

			Case control	women, aged 48-60 years OAB: n=60 Diabetes: n=60 Healthy control: n=60		dimensions ( $p<0.05$ ) OAB reported significantly worse QoL scores than diabetes group on general health, social function and role-function emotion subscales ( $p<0.05$ ).
Chiaffarino, Parazzinia, Lavezzaric & Giambanco (2003)	Italy	QoL	Case-control	N=2205 women (mean age=62.3) OAB dry: n=123 SUI: n=258 Urge incontinence: n=196 MUI: n=486 Non-OAB/UI controls: n=1143	SF-12	OAB reported worse QoL mean scores than controls. No significant difference between OAB and UI groups. OAB reported significantly decreasing QoL scores with increasing symptom severity.
Coyne et al. (2004)	USA	QoL	Case-control	N=919	OAB-q	OAB-q: Both OAB groups

				<p>Women: n=555</p> <p>Men: n=364.</p> <p>OAB dry: n=228 (mean age=54.3)</p> <p>OAB wet: n=168 (mean age=60.0)</p> <p>Non-OAB control: n= 523 (mean age=52.2)</p> <p>OAB also split into:</p> <p>Sudden urge: n=369</p> <p>No sudden urge: n=544</p>	<p>SF-36</p> <p>CES-D</p> <p>MOS-sleep</p>	<p>reported significantly worse QoL scores than controls, and OAB wet reported worse scores than OAB dry (all <math>p &lt; 0.0001</math>).</p> <p>OAB with sudden urge reported significantly worse QoL than OAB with no sudden urge (<math>p &lt; 0.0001</math>).</p> <p>SF-36: Both OAB groups significantly worse scores on all domains than controls. OAB wet reported significantly worse scores than OAB dry.</p> <p>Significantly worse scores on all domains in OAB with sudden urge than OAB with no sudden urge (<math>p &lt; 0.0001</math>).</p>
--	--	--	--	--	--	---

						<p>CES-D: Significantly higher prevalence of depression in OAB with sudden urge than OAB with no sudden urge (<math>p &lt; 0.0001</math>)</p> <p>MOS-sleep: Significantly poorer sleep quality in OAB with sudden urge than OAB with no sudden urge (<math>p &lt; 0.0001</math>).</p>
Coyne et al. (2007)	USA	Sexual function	Cross-sectional Qualitative	<p>N=34 female clinic patients (mean age=48.4)</p> <p>OAB dry: n=11</p> <p>OAB dry: n= 23</p>	<p>Focus Group</p> <p>OAB-q</p> <p>SQoL-F</p>	<p>OAB-q: OAB wet and OAB dry reported similar QoL scores.</p> <p>SQoL-F: OAB dry reported lower sexual quality of life scores than OAB wet. Both groups reported scores lower than both healthy women and women with sexual dysfunction.</p>

						<p>Focus group: OAB wet reported embarrassment at their incontinence and OAB, and a loss of self-image.</p> <p>Both wet and dry OAB groups reported difficulty orgasming due to pain, fear of incontinence, or anxiety related to sex.</p> <p>Both wet and dry OAB groups reported this having an impact on their relationships with partners.</p> <p>All participants reported concern about the impact of OAB on their sex life.</p>
Coyne et al. (2008)	Canada, Germany,	QoL Sexual function	Case-control	N=2868 OAB: n=1434 of	EQ-5D CES-D	CES-D: All OAB reported significantly higher levels of

	Italy, Sweden and UK	Emotional well-being		<p>which:</p> <p>OAB dry (1): n=440</p> <p>OAB wet (2): n=263</p> <p>OAB with postmicturition (3): n=162</p> <p>OAB with voiding (4): n=287</p> <p>OAB with postmicturition &amp; voiding (5): n=281</p> <p>Non-OAB control: n=1434</p> <p>Women: n=1864</p> <p>Men: n=1,004</p> <p>Mean age OAB =</p>	OAB-q SF PPBC	<p>depression than controls (p&lt;0.001). Scores significantly different between OAB subgroups (p&lt;0.001), where scores become progressively worse through groups 1–5.</p> <p>EQ-5D: All OAB reported significantly worse QoL scores than controls (p&lt;0.001). Oab subgroup 5 reported significantly worse QoL than other subgroups (p&lt;0.001). Subgroup 1 had significantly better QoL scores than all subgroups except 2 (p&lt;0.001).</p> <p>All OAB reported being</p>
--	----------------------------	----------------------	--	--	------------------	--

				53.8 Mean age controls = 53.7		significantly less sexually active (p=0.002) and significantly more decreased enjoyment of sexual activity (p<0.001) than controls. Significantly lower levels of sexual activity in subgroup 5 (p<0.001).
Coyne, Matza & Brewster-Jordan (2009)	USA	QoL of patients and their family/significant others	Cross sectional. Qualitative – focus group	N = 45, of which: OAB wet–family member dyads: n=14 (OAB women: n=12, family member women: n=6; mean ages 62.9 and 59.2) OAB dry family members: n=17	Focus Group	Family/sig others reported urinary frequency significantly limits activities (e.g. social, travel, physical) therefore reducing amount of quality time spent together or preventing enjoyable events. It also increases amount of planning/organisation/time for toilet stops required causing anxiety, pressure and extra



				(women: n=6; mean age 46.6)		workload for sig other. Nocturia results in lack of sleep and fatigue for sig others affecting daily functioning and work productivity. Relatives/sig others reported numerous emotions associated with patients problems including anxiety, sympathy, empathy, embarrassment, anger, frustration and worry. OAB sufferers underestimated emotional impact on relatives/sig others.  Significant impact on sexual life reported as a result of reduced
--	--	--	--	-----------------------------	--	--

						intimacy or interruption to sexual activity due to urgency. For some this placed strain on relationship.
Coyne et al., (2011a)	UK and Sweden	Anxiety Depression QoL	Cross sectional – Survey	N = 5829 Age ≥ 40 UK: n=4310 of which: Men: n=1699 Women: n=2611 No/minimal symptoms: n=1865 OAB without bother: n=1163 OAB with bother: n=1282. Sweden: n = 1564 of	SF-12 HADS	SF-12: UK and Swedish men and women in all OAB groups reported significantly worse QoL scores than no/minimal symptom groups (all p<0.001). All OAB with bother groups reported significantly worse QoL scores than all OAB without bother groups (all p<0.001). HADS: Prevalence of anxiety and depression was significantly higher in all OAB with bother groups than OAB without bother

				<p>which:</p> <p>Men: n= 676</p> <p>Women: n=888</p> <p>No/minimal symptoms: n=759</p> <p>OAB without bother: n=192</p> <p>OAB with bother: n=613</p>		<p>and no/minimal symptom groups (all <math>p &lt; 0.001</math>). OAB without bother groups had significantly higher levels of depression and anxiety than no/minimal symptoms groups (<math>p &lt; 0.001</math>). Levels of anxiety and depression higher in UK than Sweden, particularly in men.</p>
Coyne et al. (2011b)	UK, US and Sweden	Sexual function	Cross-sectional	<p>N=14,411</p> <p>Women: n=8085</p> <p>Men: n=6326.</p> <p>No/minimal symptoms: n=6038</p> <p>OAB dry: n=2948,</p> <p>OAB wet: n=5425.</p>	SQL (2 items)	<p>OAB participants reported worry over the future of their sexual life significantly more than those with no/minimal symptoms (<math>p &lt; 0.001</math>).</p> <p>OAB reported feeling as though they had 'lost something' in</p>

				Mean age=56.35		terms of their sexual life significantly more than those with no/minimal symptoms (p<0.001).
Currie et al. (2006)	UK	QoL	Cross-sectional postal survey	<p>N = 609 OAB clinic patients</p> <p>OAB dry: n=214</p> <p>OAB wet: n=317</p> <p>Unstated OAB type: n=78</p> <p>Men: n=412 (mean age=67.2)</p> <p>Women: n=197 (mean age=59.9)</p>	EQ5D SF-36	<p>OAB reported significantly worse QoL scores on both the SF-36 and EQ5D (both p&lt;0.001).</p> <p>In OAB dry group, experiencing urgency significantly reduced social and mental role functioning (p=0.069 and p=0.080 respectively), and frequency significantly reduced energy (p&lt;0.05).</p> <p>In OAB wet group, experiencing urgency significantly reduced</p>

						social functioning and mental role functioning (both $p<0.05$ ), and frequency significantly reduced energy ( $p<0.05$ )
Dmochowski & Newman (2007)	USA	QoL relationships emotions treatment experiences	Cross sectional – internet survey	N = 1228 women Control (no OAB): n=330 OAB: n=898 of which: current users of OAB medication: n=309 previous OAB medication users: n=265 Never treated:	ICIQ-SF	OAB treated/previously treated groups significantly more likely to report their daily lives were interrupted by OAB and that they felt more confined to their home than never treated OAB (both $p<0.05$ ).  OAB reported significantly more feelings of low self-esteem, more disturbed sleep, more feelings of imposition on family members and less interest in sex (all

				<p>n=324.</p> <p>Mean age OAB=50</p> <p>Mean age control=48</p>		<p>p&lt;0.05).</p> <p>Participants whose OAB symptoms were rated as severe were significantly more likely report a negative impact of OAB on all QOL questions than OAB participants with mild/moderate symptoms.</p>
<p>Irwin, Milsom, Kopp, Abrams &amp; Cardozo (2005)</p>	<p>France, Germany, Italy, Spain, Sweden and UK</p>	<p>Employment, social interactions and emotional well-being</p>	<p>Cross sectional – survey</p>	<p>N = 11,521</p> <p>OAB: n=1272 (numbers of OAB wet and OAB dry not given)</p> <p>Aged 40-64 years</p>	<p>No specific measure reported</p>	<p>OAB reported symptoms made them feel depressed (32%), stressed (28%) and that the symptoms were a cause for concern (28%).</p> <p>76% reported OAB interfered with daily activities or made them more difficult.</p>

						<p>OAB wet reported feeling significantly more depressed, stressed, more worried about taking part in activities away from home and feeling more uncomfortable in social situations (all <math>p &lt; 0.05</math>).</p> <p>Men were significantly more likely than women to report an impact of OAB wet on daily work life (<math>p &lt; 0.05</math>).</p>
<p>Knight, Luft, Nakagawa &amp; Katzman (2011)</p>	USA	Anxiety, QoL, stress	Case control	<p>N = 56 women</p> <p>OAB dry: n=28</p> <p>Age matched non-OAB controls: n=28.</p> <p>Age 18-55</p>	<p>BAI</p> <p>Recent life changes questionnaire</p>	<p>BAI: OAB reported significantly higher anxiety scores than controls (<math>p = 0.032</math>).</p> <p>Life changes questionnaire: No significant difference in life stress</p>

						scores.
Lieberman et al. (2001)	USA	QoL	Case-Control	N = 674  OAB wet: n=185,  OAB dry: n=298,  Controls: n=191.  Age ≥18.  Men n = 244  Women n = 440	SF-20	OAB wet reported significantly worse scores in mental health and social functioning than controls (both p<0.001).  OAB dry reported significantly worse scores in mental health than controls (p=0.026), but no significant differences in social functioning.
Milsom, Kaplan, Coyne, Sexton & Kopp (2012)	USA	QoL  Anxiety  Depression	Cross sectional –  Internet  Survey	N = 20,000 Age ≥40  No/minimal OAB symptoms: n=5054  OAB without bother: n=2372  OAB with bother:	OAB-q  SF-12  HADS	OAB-q: OAB without bother and OAB with bother groups reported significantly worse quality of life than no/minimal OAB group (all p<0.001)  OAB with bother groups reported



				n=4417 Men: n=9416 Women: n=10,584		significantly worse quality life than OAB without bother groups (all $p < 0.001$ ).  SF-12: OAB without bother and OAB with bother reported significantly worse mental health scores than no/minimal OAB groups (all $p < 0.001$ ).  OAB with bother groups reported significantly worse mental health scores than OAB without bother groups ( $p < 0.001$ ).  HADS: Significantly greater levels of anxiety and depression in OAB with bother and OAB without bother than no/minimal OAB
--	--	--	--	--	--	---

						<p>groups (all <math>p &lt; 0.001</math>)</p> <p>Significantly greater levels of anxiety and depression in OAB with bother than OAB without bother groups (all <math>p &lt; 0.001</math>).</p>
Newman & Koochaki (2011)	USA	Effect of sleep interruption in OAB	Cross Sectional – Internet Survey	<p>N = 411 women aged 40-70 years</p> <p>OAB sleep disrupted (SD): n=206</p> <p>OAB less sleep disrupted (LSD): n=104</p> <p>Non OAB control: n=101</p>	SF-12v2 OAB-q	<p>SF-12: Both OAB LSD and OAB SD had clinically significantly lower mean scores than controls on all domains except mental health.</p> <p>OAB SD had clinically significantly lower mean scores than OAB LSD on all domains except mental health.</p> <p>OAB-q: OAB LSD and OAB SD reported significantly worse scores on all quality of life</p>

						domains than controls (all p<0.001)  OAB SD reported significantly worse scores on all quality of life domains than OAB LSD (all p<0.001).
Nicolson et al (2008)	UK	QoL  Psychological difficulties	Cross-sectional	N = 18  Men: n=8  Women: n=10  Mean age = 63	Focus groups  Individual interviews	Themes:  1. Experience of urgency  2. Fear and coping strategies  3. Anxiety about everyday living  4. Depression and hopelessness  5. Embarrassment  6. Self-esteem, sexuality and embodiment
Oh & Ku (2007a)	Korea	QoL	Case-control	N=320 women  OAB: n=92	SF-36  KHQ	SF-36: OAB had significantly worse scores on mental health

				<p>SUI: n=158</p> <p>Non-OAB control: n=70</p> <p>Mean Age 51.15</p>		<p>domain than controls (<math>p &lt; 0.05</math>).</p> <p>KHQ: OAB had significantly worse scores than controls on all domains, including emotional problems (all <math>p &lt; 0.001</math>)</p>
Oh & Ku (2007b)	Korea	QoL	Case control	<p>N=162 females:</p> <p>OAB: n=92</p> <p>Non-OAB controls: n=70</p> <p>Mean age = 53.3</p>	<p>SF-36</p> <p>KHQ</p>	<p>SF-36: OAB scores sig lower than controls in social functioning (<math>p=0.04</math>) and mental health (<math>p=0.001</math>) domains.</p> <p>KHQ: OAB scores indicate sig worse QoL than controls on all domains (<math>p &lt; 0.001</math>).</p>
Oh et al. 2008	Korea	QoL	Cross-sectional	<p>N=245 female clinic patients</p> <p>OAB: n=122</p> <p>SUI: n=123</p>	<p>SF-36</p> <p>BFLUTS</p>	<p>OAB mean scores were 59.7 and 56.9 on Role-emotional functioning and mental health domains, respectively. (score out</p>

				Mean age = 50.4		100, where greater scores represent better health)  significant difference between OAB and SUI on general health domain only (p<0.05)
Ozgur Yeniel et al. (2012)	Turkey	QoL	Cross-sectional	N=265 female midwifery students  OAB: n=94  non-OAB: n=171  Mean age = 21.74	OABq-SF  NQOL	OAB had significantly worse quality of life scores than non-OAB (p<0.001)  OAB scores significantly worse on bother/concern subscale of NQOL than non-OAB (p<0.001).
Safarinejad (2009)	Iran	QoL  Sexual function	Cross-sectional	N=8,748 population sample (women only)  Non-OAB: n=7,327  OAB: n=1421, of	Physician interview  BFLUTS  VAS (0-10)	OAB had significantly higher prevalence of anxiety (p<0.001), depression (p<0.05) and tiredness (p<0.001).  VAS: OAB 44.6%, 22.6% and

				<p>which:</p> <p>OAB wet: n=435</p> <p>OAB dry: n=986</p> <p>Age 15 to 55</p>		<p>32.8% reported mild, moderate and severe bother, respectively.</p> <p>48% of family members reported concern, disturbance and embarrassment as result of participant's OAB</p>
Sexton et al. (2011)	USA	<p>QoL</p> <p>Mental health</p>	Cross-sectional	<p>N=5,362 population sample of over 65s</p> <p>OAB women: n=1,350</p> <p>OAB men: n=1,004</p> <p>Non-OAB women: n=682</p> <p>Non-OAB men: n=452</p>	<p>HADS</p> <p>SF-12</p> <p>OAB-q</p>	<p>HADS: Significantly more anxiety and depression in both OAB men and OAB women than non-OAB groups (both p&lt;0.001).</p> <p>SF-12: Significantly worse scores in physical and mental domains in both OAB men and OAB women than non-OAB groups (all p&lt;0.001)</p> <p>OAB-q: Significantly worse quality</p>

						of life scores in both OAB men and OAB women than non-OAB groups (both p<0.001).
Stewart et al. (2003)	USA	QoL Depression Sleep	Cross-sectional case-control	N=919, over 25 years of age OAB wet: n=169 OAB dry: n=228 age-/sex-matched non-OAB control: n=522 Men: n=364 Women: n=555	SF-36 CES-D MOS-Sleep	SF-36: Both OAB wet and OAB dry had significantly lower scores on physical and mental scales than controls. Scores in all domains lowest for OAB wet. Clinically significant (5 point) difference between OAB wet and OAB dry in all domains except mental health. CES-D: Both OAB wet and OAB dry had significantly worse scores than controls. Men in OAB wet group had

						<p>significantly worse scores than men in OAB dry (<math>p&lt;0.05</math>).</p> <p>MOS-Sleep: Both OAB dry and OAB wet had significantly worse sleep quality scores.</p> <p>Men in OAB wet group had significantly worse scores than men in OAB dry (<math>p&lt;0.05</math>).</p>
Sut, Kaplan, Sut & Tekbas (2012)	Turkey	QoL	Cross-sectional	<p>N=280 female gynaecology outpatients</p> <p>OAB: n=109</p> <p>non-OAB: n=171</p> <p>Mean age = 47</p>	OAB-q EQ-5D	<p>OAB-q: OAB total and domain scores (coping, concern, sleep &amp; social) significantly worse than non-OAB (<math>p&lt;0.001</math>).</p> <p>EQ-5D: OAB had significantly worse scores than non-OAB on EQ-5D VAS (<math>p=0.006</math>) and EQ-5D index (<math>p&lt;0.001</math>).</p>



Teloken et al. (2006)	Brazil	Daily living Emotional distress	Cross- sectional	N=848 population sample, aged 15 to 55 years OAB: n=160 non-OAB: n=688 Men: n=399 Women: n=449	Own questionnaire, developed from KHQ & AUA	OAB reported significant impairment in daily living, inc. sleep, work, social life, sexual life (all $p<0.001$ ).  OAB significantly higher prevalence of depression ( $p=0.036$ ), anxiety ( $p<0.001$ ), shame ( $p<0.001$ ) and tiredness ( $p<0.001$ )  No difference in daily living scores between OAB wet and OAB dry, except physical activities (OAB wet more impaired, $p=0.004$ ).  OAB wet reported more anxiety ( $p=0.003$ ) and shame ( $p=0.006$ )
-----------------------	--------	---------------------------------------	---------------------	--	---	--

						than OAB dry.
Tomoe, Sekiguchi, Horiguch & Toma (2005)	Japan	QoL	Cross- sectional	N=262 female lecture attendees OAB: n=36 SUI: n=158 Urinary frequency (UF):n=22 Control: n=18 Mean age = 55.9	IIQ-7 (modified) VAS (0-10)	IIQ-7: OAB reported impact on work (38.5%), housework (42.3%), 'going out' (84.6%), socialising (34.6%), depression (46.2%), frustration (19.2%), and sex life (7.7%) domains. VAS: OAB mean of 4.21 (0=no impact). OAB and UF had higher VAS scores than SUI and controls.
Van der Vaart, de Leeuw, Roovers & Heintz (2002)	Netherlands	QoL	Cross- sectional	N=933 population sample, women aged 20-45 OAB: n=111 Urge incontinence: n=143	IIQ	OAB significantly associated (p<0.05) with higher IIQ score (worse QOL) on all domains except embarrassment (social function, physical function, mobility, emotional).

				SUI: n=365 Diagnosis threshold not met: n=314		Greatest effect on mobility domain.
Vaughan et al.(2011)	Finland	QoL	Cross-sectional	N=3493 population sample, mean age = 42.82 No OAB/UI: n=1,416 Rare OAB/no UI: n=1,410 Often OAB/no UI: n=104 Rare OAB/rare UI: n=335 Often OAB/rare UI: n=119 Often OAB/often UI:	15D	Severity of OAB symptoms significantly associated with worse quality of life scores in all dimensions (all p<0.001) Significantly worse scores in all often OAB groups and rare OAB/rare UI group than no OAB group. Significantly worse scores in often OAB with rare/often UI groups than rare OAB/rare UI group. Significantly worse scores in often OAB/often UI group than often

				n=38 Men: n=1655 Women: n=1838		OAB with no/rare UI groups.
Wattanayingcharoenchai et al. (2007)	Thailand	QoL	Cross-sectional	N=319 undiagnosed women at clinic, of which: OAB: n=78 SUI: n=55 Both OAB & SUI: n=186 Mean age = 57.3	I-QOL IIQ-7	I-QOL: Mean scores out of 100 for OAB only (high score = better QOL): Avoidance & limiting behaviour (75.8), Psychosocial impact (79.1), embarrassment (76.2). No sig. difference between OAB and SUI groups, OAB+SUI reported sig. greater impairment in all domains (p<0.05). IIQ-7: Moderate to great impact of OAB only on social relationships (38.5%), emotional

						health (43.6%) SUI+OAB group had sig. more impairment than OAB or SUI groups in emotional health domain (p<0.05).
Yoo et al. (2011)	Korea	Sexual functioning Anxiety Depression	Cross-sectional	n=2,000 population sample, over30years OAB: n=458 Control: n=1,542 Men: n=1,000 Women: n=1,000	KHQ (2 items only) K-HADS	37.6% OAB reported moderate/severe impact on daily life 19.9% OAB reported impact on sexual life More depression and anxiety in OAB compared to control (p<0.001)

Table 1. Summary of main characteristics of included studies

Abbreviations of measures used: AUA=American Urological Association symptom score, BAI=Beck Anxiety Inventory, BFLUTS=Bristol Female Lower Urinary Tract Symptoms questionnaire, CES-D=Center for Epidemiologic Studies Depression Scale, EQ-5D=EuroQol Five-Dimensional Questionnaire, HADS=Hospital

Anxiety and Depression Scale, ICIQ-SF=International Consultation on Incontinence Questionnaire – short form, IIQ=Incontinence Impact Questionnaire, IIQ-7=short form incontinence impact questionnaire, I-QOL=incontinence-specific quality of life questionnaire, K-HADS=Korean Hospital Anxiety and Depression Scale, KHQ=King’s Health Questionnaire, MOS-Sleep=Medical Outcomes Sleep Scale, OAB-q=overactive bladder questionnaire, OABq-SF=overactive bladder questionnaire – short form, PPBC=Patient Perception of Bladder Condition, SF-12=Short Form 12, SF-20=Short Form 20, SF-36=Short Form 36, SQoL=Sexual Quality of Life Female, VAS=visual analogue scale

Only information pertaining to the impact of OAB on psychological well-being is reported.