

## Involvement of Older People in the Development of Fall Detection Systems: A Scoping Review

Table 3: Focus and stage(s) of involvement of older people in the development of fall detection systems

Author(s) and year	Involvement of older people										Stages of involvement <sup>4</sup>				
	Focus of involvement										I	II	III	IV	
	Technical aspects					Views of older people					I Idea Generation & Concept Development	II Device (Re-) Design & Prototype Development	III Prototype Testing in-House & Trials in Real Field	IV Deployment in the Market & User Feedback	
	Simulation / performance					Focus group interview (s) WITH prototype	Focus group interview (s) Focus group interview (s) WITH visual material - power point presentation (fall detection system) or video (fall scenarios)	Single interview (s)	Single interview (s) WITH video (fall scenarios)	Questionnaire/s					
Scripted ADL <sup>3</sup> Everyday life activities	Setting		N.s. clearly												
	Lab	Real-life		Home	Hospital	Nursing home	Community centre	Independent living facility	Long-term care facility						
Abbate et al (2012)	N.a.	N.a.								X			X		
Ariani et al (2010)	X	X											X		
Barralon et al (2013)	X	X											X		
Bloch et al (2011)	X	X											X		
Bourke et al (2008a)	X	X											X		
Bourke et al (2007)	X	X											X		
Bourke et al (2012)	X	X										X			
Bourke et al (2010a)	X	X	X											X	
Bourke et al (2010b)	X	X	X											X	
Bourke et al (2008b)	X	X											X		
Bourke et al (2010c)	X	X	X											X	

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Scripted ADL <sup>3</sup>	Everyday life activities	Setting		N.s. clearly												
		Lab	Real-life													
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Bourke et al (2008c)	X		X										X			
Boyle & Karunanithi (2008)	X		X										X			
Campo et al (2010)	X		X										X			
Che-Chang et al (2007)	X					X						X				
De la Guia Solaz et al (2010)	X	X											X			
Demiris et al (2004)	N.a.	N.a.					X				X					
Fourty et al (2009)	X					X						X	X			
Marquis-Faulkes et al (2005)	N.a.	N.a.					X					X				
Gietzelt et al (2012)	X	X						X					X			
Godfrey et al (2011)	X	X											X			
Goevercin et al (2010)	N.a.	N.a.					X			X	X					
Holzinger et al (2010)	N.a.	N.a.				X				X		X				

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Scripted ADL <sup>3</sup>	Everyday life activities	Setting			N.s. clearly											
		Lab	Real-life													
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Horton (2008)	N.a.	N.a.						X								X
Huang et al (2012)	X													X		
Jantaraprim et al (2012)	X													X		
Kangas et al (2012)	X			X										X		
Kangas et al (2009)	X			X										X		
Kerdegari et al (2012)	X	X												X		
Lai et al (2010)	X	X												X		
Lai et al (2011)	X	X												X		
Lindemann et al (2005)	X					X								X		
Shinmoto et al (2013)	X		X							X				X		
Liu & Lockhart (2013)	X	X												X		
Londei et al (2009)	N.a.	N.a.						X	X					X		
McKenna et al (2006)	N.a.	N.a.					X	X						X		

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	Lab	Real-life	Home	Hospital	Nursing home	Community centre	Independent living facility	Long-term care facility	N.s. clearly									
Yu et al (2013)	X									X					X			
Narasimhan (2012)	X				X										X			
Parker et al (2008)	N.a.	N.a.											X	X				
Quagliarella et al (2008a)	X									X					X			
Quagliarella et al (2008b)	X	X														X		
Rantz et al (2013)	X X	X				X							X		X	X		
Sixsmith & Johnson (2004)	N.a.	N.a.								X					X			
Soaz et al (2012)	X									X						X		
Stone & Skubic (2014)	X					X										X		
Tamrat et al (2012)	X X				X	X	X									X		
van de Ven et al (2008a)	X	X														X		
van de Ven et al (2008b)	X						X									X		
Wang et al	X									X						X		

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	Lab	Real-life	Home	Hospital	Nursing home	Community centre									
(2014)															
Wu & Xue (2010)	X											X			
Wu & Xue (2008)	X											X			
Zhang et al (2006)	X	X											X		
John et al (2008)	X	X											X		

<sup>\*3</sup>Activity of daily living; <sup>\*4</sup>according to Shah et al<sup>33</sup>