Abstract

Purpose – The purpose of this paper is to review peer-reviewed original research articles on authentic leadership (AL) in health care to identify potential research gaps and present recommendations for future research. The objectives are to examine and map evidence of the main characteristics, research themes and methodologies in the studies. AL is a leader’s non-authoritarian, ethical and transparent behaviour pattern.

Design/methodology/approach – A scoping review with thematic analysis was conducted. A three-step search strategy was used with database and manual searches. The included studies were composed of English language peer-reviewed original research articles referring to both AL and health care.

Findings – In total, 29 studies were included. The studies favoured Canadian nurses in acute care hospitals. AL was understood as its original definition. The review identified four research themes: well-being at work, patient care quality, work environment and AL promotion. Quantitative research methodology with the authentic leadership questionnaire and cross-sectional design were prevalent.

Research limitations/implications – Future research needs more variation in research themes, study populations, settings, organisations, work sectors, geographical origins and theory perspectives. Different research methodologies, such as qualitative and mixed methods research and longitudinal designs, should be used more.

Originality/value – This is presumably the first literature review to map the research on AL in health care.

Keywords Health care, Authentic leadership, Scoping review

Paper type Literature review

1. Background

Authentic leadership (i.e. AL) is a leader’s non-authoritarian (Costas and Taheri, 2012), ethical and transparent behaviour pattern (Avolio et al., 2009), which can be seen as the basis and core of all positive leadership forms. The grounds of AL are based on positive and humanistic psychology. (Avolio and Gardner, 2005.) AL strives for trusting, symmetrical and close leader–follower relationships (Costas and Taheri, 2012) and promotes the open sharing of information and consideration of employees’ viewpoints (Avolio et al., 2009). AL consists of four dimensions: self-awareness, balanced processing, an internalised moral perspective and relational transparency (Walumbwa et al., 2008). AL offers help for organisational problems, such as leader’s selfishness and short-sightedness. It provides a new normative ideal that emphasises values, ethics, the common good and consistency between words and actions. (Costas and Taheri, 2012).

Health-care organisations with modern challenges, such as economic and technological changes, call for high-quality leadership (Dickson, 2009). The challenges create a need for the leader’s transparency and value awareness, as well as the moral and ethical viewpoints of
leadership (Clapp-Smith et al., 2009). AL can have a positive influence on health-care organisation staff and the whole health-care system (Shirey, 2006), including high-quality patient care (Johansson et al., 2011), and it may influence positively even on society as a whole (Shirey, 2006). Regardless of the increased interest towards AL (Costas and Taheri, 2012), the theory has also been criticised (Gardiner, 2011; Algera and Lips-Wiersma, 2012). Some of the critiques are concerned with certain shortcomings, such as overlooking social and historical circumstances that may affect the ability to act as a leader (Gardiner, 2011) and focusing on the individual leader instead of examining the entire organisation (Algera and Lips-Wiersma, 2012). This review does not take a stand on the critique, but maintains an objective stance towards AL theory. In addition, the definition of AL is fairly ambiguous and has many levels (Vakkala and Syväjärvi, 2012). Besides the popular humanistic–positive perspective, another way of seeing AL is existential–experiential perspective. These perspectives have different ontological preconditions but do not contradict each other. (Koskinemi et al., 2015.) For the sake of coherence, this article uses the prevailing definition of AL (Luthans and Avolio, 2003).

AL has been studied internationally in health-care context and it has been discovered to cause many positive effects (Stander et al., 2015). Yet, there is still little empirical research on AL in health care. As this is still a relatively new study subject in the health-care setting (Spence Laschinger et al., 2013), the scoping review method is useful for reviewing this kind of discipline with emerging evidence, as the review has a broad approach to the subject (Peters et al., 2015). Therefore, the purpose of this study is to review peer-reviewed original research articles on AL in health care to identify potential research gaps and present recommendations for future research. The objectives are to examine and map evidence of main characteristics, research themes and methodological choices in the studies.

2. Methods
This review is based on the scoping review methodology (Arksey and O’Malley, 2005; Levac et al., 2010). The objectives, inclusion criteria and methods were documented in a protocol in advance. The review had a three-step search strategy. The first step was to use two relevant online databases to conduct an initial limited search (Peters et al., 2015). The databases used for the initial search were CINAHL and Medline. After the initial papers were retrieved, the keywords from their titles, abstracts and index terms were analysed (Peters et al., 2015).

The second step was to use all the included databases using the identified keywords and index terms (Peters et al., 2015). The databases included were: CINAHL, Medline, PubMed, Scopus, ABI/INFORM Complete, Business Source Complete, Web of Science, Academic Search Premier, PsycARTICLES, Medic, Arto and Melinda. The search phrases were combinations of “authentic leadership”, “healthcare”, “medicine” and “nursing”. The searches were limited to peer-reviewed English language and Finnish language articles. A manual search was conducted using key journals involving leadership in health care. Leadership in Health Services, the Journal of Nursing Management and the Journal of Nursing Administration were searched manually for additional articles. ResearchGate was also used.

The third step was to search for additional studies in the reference lists of all the identified articles (Peters et al., 2015). The searches were conducted in December 2016. The search process was carried through with the close collaboration of the researchers. The a priori protocol was developed together by all three researchers. However, the searches were conducted by the main researcher, after which two researchers selected the articles on grounds of the criteria. An information specialist was consulted about the search strategy (Arksey and O’Malley, 2005). The RefWorks reference system was used for managing the citations.

After the searches, the relevant studies were identified by first removing duplicates, then screening the articles and finally assessing the full-text articles for eligibility (Moher et al., 2009).
In this review, the inclusion criteria consisted of English language and Finnish language peer-reviewed original research articles referring to both AL and healthcare. Restrictions on languages were imposed because of limited resources for translation. Although the collected data could have comprised different types of evidence (Arksey and O'Malley, 2005), in this review, the information sources were limited to peer-reviewed original research articles, as the purpose was to identify possible research gaps. There were no limitations to research methodologies of the original research studies (Arksey and O’Malley, 2005), nor timeframe limitations.

The searches identified 615 records, of which 314 remained after removing duplicates. In total 135 full-text articles were screened for eligibility (Figure 1). The methodological quality of the studies that were included was not formally assessed, which allowed the review to gain a more complete overview of the topic (Arksey and O’Malley, 2005). The review resulted in 29 English language peer-reviewed original research studies. There were no Finnish language studies found that met the inclusion criteria. The data was analysed using a descriptive numerical summary analysis and a thematic analysis. Research gaps were identified as well. (Levac et al., 2010).

3. Results
3.1 Study characteristics
The included studies had a year range of 2009 to 2016 (Tables I-IV summarise the main characteristics of the included studies). Of all the included studies, the majority originated...
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<tr>
<th>Author(s), year of publication, country of origin</th>
<th>Purpose</th>
<th>Study population and sample size</th>
<th>Methodology</th>
<th>Key findings</th>
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<tbody>
<tr>
<td>Fallatah and Spence Laschinger (2016) Canada</td>
<td>To test a theoretical model linking AL to NGNs’ job satisfaction through its effect on supportive professional practice environments</td>
<td>93 NGNs (AC settings)</td>
<td>Quantitative/CSD Secondary analysis of data collected in a two-wave survey The ALQ Statistical analyses</td>
<td>Supportive professional practice environment partially mediated the relationship between AL and job satisfaction</td>
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<tr>
<td>Fallatah et al. (2016) Canada</td>
<td>To examine the influence of AL on NGNs’ job turnover intentions through NGNs’ personal identification with their leader, organisational identification, and occupational coping self-efficacy</td>
<td>998 NGNs (AC and community settings)</td>
<td>Quantitative/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL indirectly impacts turnover intentions through personal and organisational identification and occupational coping self-efficacy The identifications increase nurses’ confidence in their ability to manage work-related challenges that result in positive outcomes in both nurses and the organisation</td>
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<tr>
<td>Malik et al. (2016) India</td>
<td>To examine the relationship between AL and employee creativity, while determining the mediating effect of knowledge sharing behaviour and moderating effect of use of information technology on this association</td>
<td>405 nurses and their 81 supervisors Hospitals</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL is positively linked to creativity Knowledge sharing behaviour mediates the relationship between AL and employee creativity, whereas use of information technology acts as a moderator between knowledge sharing behaviour and employee creativity</td>
</tr>
<tr>
<td>Mortier et al. (2016) Belgium</td>
<td>To examine the relationship between perceived AL and two dimensions of thriving (learning and vitality) among nurses, and to study the mediating role of empathy in this relationship</td>
<td>360 nurses (several specialities) Hospital</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL enhances thriving at work Empathic nurse managers increase vitality of their nurses</td>
</tr>
<tr>
<td>Spence Laschinger and Read (2016) Canada</td>
<td>To examine how AL and person-job fit influence civility norms and how these norms, in turn, affect co-worker incivility and subsequent emotional exhaustion</td>
<td>993 NGNs (several specialties)</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>Civility norms help prevent early career burnout and co-worker incivility Leaders can influence civility norms by engaging in AL behaviours and optimising person-job fit</td>
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<tr>
<td>Rahimnia and Sharifrad (2015) Iran</td>
<td>To examine the effects of AL on employees' well-being, and to investigate the mediating roles of followers' attachment insecurity, and to explore the impact of AL on attachment insecurity</td>
<td>212 health-care providers (nurses and medical professionals)</td>
<td>Quantitative/CSD Survey The ALI Statistical analyses</td>
<td>AL negatively impacted attachment insecurity Attachment insecurity proved to be a factor impinging upon job satisfaction, and higher levels of attachment insecurity was associated with higher levels of perceived stress and stress symptoms Attachment insecurity partially mediated the relationship between AL and job satisfaction and fully mediated the relationship between AL, perceived stress and stress symptoms</td>
</tr>
<tr>
<td>Read and Spence Laschinger (2015) Canada</td>
<td>To examine a theoretical model testing the effects of AL, structural empowerment and relational social capital on the mental health and job satisfaction of NGNs over the first year of practice</td>
<td>191 NGNs (AC settings)</td>
<td>Quantitative/longitudinal design Secondary analysis of data collected in a two-wave survey The ALQ Statistical analyses</td>
<td>Structural empowerment mediated the relationship between AL and relational social capital, which in turn had a negative effect on mental health symptoms, and a positive effect on job satisfaction</td>
</tr>
<tr>
<td>Spence Laschinger and Fida (2015) Canada</td>
<td>To test a model linking AL, structural empowerment, and supportive professional practice environments to nurses' perceptions of patient care quality and job satisfaction</td>
<td>723 nurses (several specialties)</td>
<td>Quantitative/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL had a positive effect on structural empowerment, which had a positive effect on perceived support for professional practice and a negative effect on nurses' perceptions that inadequate unit staffing prevented them from providing high-quality patient care These workplace conditions predicted job satisfaction</td>
</tr>
<tr>
<td>Spence Laschinger et al. (2015) Canada</td>
<td>To test a model linking AL, areas of work life, occupational coping self-efficacy, burnout and mental health among NGNs, and to test the validity of the concept of interpersonal strain at work as a facet of burnout</td>
<td>1009 NGNs (AC settings)</td>
<td>Quantitative/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL had positive effect on areas of work life, which in turn had a positive effect on occupational coping self-efficacy, resulting in lower burnout, which was associated with poor mental health</td>
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<tr>
<td><strong>Stander et al. (2015) South Africa</strong></td>
<td>To determine whether the leadership style of AL could predict optimism, trust in the organisation and work engagement and to establish whether optimism and trust in the organisation could mediate the relationship between AL and work engagement</td>
<td>633 employees (other, administrative, specialist, management) Hospitals and clinics (public)</td>
<td>Quantitative/CSD Survey The ALI</td>
<td>AL predicted optimism and trust in the organisation Optimism and trust in the organisation mediated the relationship between AL and work engagement</td>
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<tr>
<td><strong>Nelson et al. (2014) Canada</strong></td>
<td>To determine the mediational role of the work climate in explaining the impact of AL on psychological well-being at work</td>
<td>406 nurses Public and private health-care sectors, and education sector</td>
<td>Quantitative/time-lagged design Two-wave survey The ALQ</td>
<td>AL impacts work climate in a positive manner thereby increasing levels of psychological well-being at work</td>
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<tr>
<td><strong>Spence Laschinger and Fida (2014a) Canada</strong></td>
<td>To examine the relationship between AL and NGNs' experiences of workplace bullying and burnout over a one-year timeframe in Canadian health-care settings; to examine the process from workplace bullying to subsequent burnout dimensions, as well as to job and career turnover intentions</td>
<td>205 NGNs (AC settings) Hospitals</td>
<td>Quantitative/longitudinal design Secondary analysis of data collected in a two-wave survey The ALQ</td>
<td>AL decreased work-related bullying, burnout (emotional exhaustion and cynicism), and job and career turnover intentions</td>
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<tr>
<td><strong>Spence Laschinger and Fida (2014b) Canada</strong></td>
<td>To investigate the influence of AL, an organisational resource and psychological capital, an intrapersonal resource, on NGNs' burnout development, occupational satisfaction, and workplace mental health over the first year of their practice</td>
<td>205 NGNs (AC settings) Hospitals</td>
<td>Quantitative/longitudinal design Secondary analysis of data collected in a two-wave survey The ALQ</td>
<td>Both AL and PsyCap were associated with lower initial levels of burnout (emotional exhaustion and cynicism) and subsequent change over the one-year timeframe, which in turn, were associated with health- and job-related outcomes</td>
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<td>Bamford et al. (2013) Canada</td>
<td>To examine the relationships among nurses’ perceptions of nurse managers’ AL, nurses’ overall person-job match in the six areas of work life and their work engagement</td>
<td>280 nurses (AC settings) Hospitals</td>
<td>Quantitative/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL causes greater overall person-job match in the six areas of work life and greater work engagement</td>
</tr>
<tr>
<td>Spence Laschinger et al. (2013) Canada</td>
<td>To examine the effect of AL and structural empowerment on the emotional exhaustion and cynicism of NGNs and experienced AC nurses</td>
<td>342 NGNs and 273 experienced nurses (AC settings) Hospitals</td>
<td>Quantitative/CSD Secondary analysis of data from two studies collected in surveys The ALQ Statistical analyses</td>
<td>AL negatively influenced burnout (emotional exhaustion and cynicism) through workplace empowerment</td>
</tr>
<tr>
<td>Wong and Spence Laschinger (2013) Canada</td>
<td>To test a model linking AL of managers with nurses’ perceptions of structural empowerment, performance and job satisfaction</td>
<td>280 nurses (AC settings) Hospitals</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL significantly and positively influenced structural empowerment, which in turn increased job satisfaction and self-rated performance</td>
</tr>
<tr>
<td>Spence Laschinger et al. (2012) Canada</td>
<td>To test a model linking AL to NGNs’ experiences of workplace bullying and burnout, and subsequently, job satisfaction and intentions to leave their jobs</td>
<td>342 NGNs (AC settings) Hospitals</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL had a negative direct effect on workplace bullying, which in turn had a direct positive effect on burnout AL influenced job satisfaction indirectly through bullying and burnout AL had direct effect on job satisfaction, which in turn, was related to lower turnover intentions</td>
</tr>
<tr>
<td>Giallonardo et al. (2010) Canada</td>
<td>To examine the relationships between NGNs’ perceptions of preceptor AL, work engagement and job satisfaction</td>
<td>170 nurses (AC settings)</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL fosters work engagement and job satisfaction Engagement is an important mechanism by which AL affects job satisfaction</td>
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<td><strong>Wong et al. (2010)</strong> Canada</td>
<td>To test a theoretical model linking AL with staff nurses’ trust in their manager, work engagement, voice behaviour and perceived unit care quality</td>
<td>280 nurses (AC settings) Hospitals</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL and trust in the manager play a role in fostering trust, work engagement, and voice behaviour. Personal identification partially mediated the relationship between AL and trust in manager.</td>
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<tr>
<td><strong>Wong and Cummings (2009)</strong> Canada</td>
<td>To test a model linking AL behaviours with trust in management, perceptions of supportive groups and work outcomes (voice behaviour, job performance, burnout)</td>
<td>147 clinical-care providers, and 188 other professionals and nonclinical employees Cancer care agency</td>
<td>Quantitative/CSD Secondary analysis of data collected in a survey The LPI Statistical analyses</td>
<td>Supportive leader behaviour and trust in management are necessary for staff to be willing to voice concerns and offer suggestions to improve the workplace and patient care.</td>
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<tr>
<td>Boamah et al. (2016) Canada</td>
<td>To test a hypothesised model linking NGNs’ perceptions of their manager’s AL behaviours to structural empowerment, short-staffing and work-life interference and subsequent burnout, job satisfaction and patient care quality</td>
<td>406 NGNs (several specialties) Hospitals</td>
<td>Quantitative/time-lagged design Secondary analysis of data collected in a two-wave survey The ALQ Statistical analyses</td>
<td>AL was positively linked to structurally empowering working conditions, which in turn, negatively influenced short-staffing and work-life interference. Short-staffing and work-life interference predicted burnout development, with short-staffing increasing burnout both directly and indirectly, through its effect on work-life interference. Burnout negatively affects job satisfaction and patient care quality. Short-staffing and work-life interference mediated the relationship between AL, structural empowerment and burnout.</td>
</tr>
<tr>
<td>Stevens et al. (2014) Australia</td>
<td>To investigate to what extent an engaging or AL style is related to higher levels of patient safety performance</td>
<td>29 medical staff and 22 dental staff Hospitals and dental clinics</td>
<td>Mixed methods/CSD Survey and/or interview of participants’ perceptions of leadership style in their unit (qualitative and quantitative data) Data was analysed in terms of themes, and compared with the unit specific hand hygiene (HH) compliance data</td>
<td>Environmental factors, role modelling by the leader and education to counter false beliefs about hand hygiene and infection control may be more important determinants of patient safety performance in this regard than actual overall leadership style.</td>
</tr>
<tr>
<td>Wong and Giallonardo (2013) Canada</td>
<td>To test a model examining relationships among AL, nurses’ trust in their manager, areas of work life and nurse-assessed adverse patient outcomes</td>
<td>280 nurses (AC settings) Hospitals</td>
<td>Quantitative/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL is linked to increased trust, greater congruence in areas of work life and lower frequencies of adverse patient outcomes.</td>
</tr>
<tr>
<td>Wong et al. (2010) Canada</td>
<td>To test a theoretical model linking AL with staff nurses’ trust in their manager, work engagement, voice behaviour and perceived unit care quality</td>
<td>280 nurses (AC setting) Hospitals</td>
<td>Quantitative/CSD Survey The ALQ Statistical analyses</td>
<td>AL and trust in manager play a role in fostering trust, work engagement, and perceived quality of care. Personal identification mediated the relationship between AL and trust in the manager.</td>
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<td><strong>Coxen et al. (2016)</strong> South Africa</td>
<td>To determine whether AL affects organisational citizenship behaviour through workplace trust (conceptualized as trust in the organisation, immediate supervisor and co-workers)</td>
<td>633 employees (other, administration, management, specialist) Hospitals and/or clinics (public)</td>
<td>Quantitative study/CSD Survey The ALI Statistical analyses</td>
<td>AL has significant influence on workplace trust AL did not have significant influence on organisational citizenship behaviour AL had significant indirect effect on organisational citizenship behaviour through trust in organisation and in co-workers</td>
</tr>
<tr>
<td><strong>Regan et al. (2016)</strong> Canada</td>
<td>To examine the influence of structural empowerment, AL and professional nursing practice environments on experienced nurses’ perceptions of interprofessional collaboration</td>
<td>220 experienced nurses (long-term care, community, other settings) Hospitals</td>
<td>Quantitative study/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL may enhance IPC</td>
</tr>
<tr>
<td><strong>Spence Laschinger and Smith (2013)</strong> Canada</td>
<td>To examine NGNs’ perceptions of the influence of AL and structural empowerment on the quality of interprofessional collaboration in health-care work environments</td>
<td>194 NGNs (AC settings)</td>
<td>Quantitative study/CSD Secondary analysis of data collected in a survey The ALQ Statistical analyses</td>
<td>AL may promote IPC</td>
</tr>
<tr>
<td><strong>Shirey (2009)</strong> USA</td>
<td>To showcase the relationship among AL, organisational culture, and healthy work environments using a stress and coping lens</td>
<td>21 nurse managers (AC settings) Hospitals</td>
<td>Qualitative study/ CSD Secondary analysis of data collected in a one-time demographic questionnaire and a 14-question face-to-face interview that incorporated components of the Critical Decision Method Thematic analysis</td>
<td>Nurse managers working in positive organisational cultures generally worked in healthy work environments and engaged in more AL behaviours Nurse managers working in negative organisational cultures worked in unhealthy work environments and reported less optimism and more challenges engaging in AL practices</td>
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**Table III.** “Work environment” themed studies
from Canada, while others were from the USA, South Africa, Australia, Belgium, India, Iran and Israel. Nurses, especially new graduate nurses (i.e. NGNs), were the most common study population. Other studied occupational groups were experienced nurses, nurses’ supervisors, nurse managers, hospital CNEs, physicians, surgeons, pharmacists, RMOs, interns, dentists, dental assistants and other employees (e.g. administration, management, specialists, support staff and research staff). The nurses had different specialities depending on the study. Most of the studies were conducted in hospitals, but clinics, dental clinics, HMOs and a cancer care agency were studied as well. Acute care (i.e. AC) was the most researched setting. Other settings were community and long-term care. Only a few studies specified the studied work sector, however, the public and private health-care sectors were mentioned in some cases. Educational and religious sectors were mentioned as well. All the included studies understood AL according to its original definition (Luthans and Avolio, 2003). The results of the included studies underlined the positive effects of AL in health care (Tables I-III).

3.2 Research themes
The review identified four research themes amongst the included studies. The themes were named as follows: well-being at work, patient care quality, work environment and AL promotion (Figure 2).

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<tr>
<th>Author(s), year of publication, country of origin</th>
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<th>Study population and sample size</th>
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<tr>
<td>Shapira-Lishchinsky (2014) Israel</td>
<td>To explore nurses’ ethical decision-making in team simulations to identify the benefits of these simulations for AL</td>
<td>50 nurses (several specialities) Hospitals and HMOs (public, private, religious)</td>
<td>Qualitative/CSD Team simulations in 10 teams Qualitative data analysis based on Grounded Theory</td>
<td>Team-based simulation as a training tool may lead to AL among nurses</td>
</tr>
<tr>
<td>Murphy (2012) USA</td>
<td>To explore the experiences of hospital chief nurse executives (CNEs) in becoming and remaining authentic nurse leaders</td>
<td>1 current and 2 former hospital CNEs Hospitals</td>
<td>Qualitative/CSD 2 semi-structured interviews focused on the life stories of participants Narrative inquiry</td>
<td>Reframing, reflection in alignment with values, and courage are important as nurse leaders progress to authenticity</td>
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Table IV. “AL Promotion” themed studies

![Figure 2. Research themes of the included studies](image-url)
3.2.1 Well-being at work. The largest research theme was well-being at work (Table I). This research theme included research on many psychological and rather personal issues involving working life. To be precise, the studies in this category included research on AL’s relationship with psychological well-being at work (Nelson et al., 2014), work engagement (Bamford et al., 2013; Stander et al., 2015), job satisfaction (Giallonardo et al., 2010; Wong and Spence Laschinger, 2013; Spence Laschinger and Fida, 2014b; Rahimnia and Sharifirad, 2015; Read and Spence Laschinger, 2015; Spence Laschinger and Fida, 2015; Fallatah and Spence Laschinger, 2016), creativity (Malik et al., 2016), two dimensions of thriving (learning and vitality) (Mortier et al., 2016), voice behaviour (Wong and Cummings, 2009; Wong et al., 2010), performance (Wong and Cummings, 2009; Wong and Spence Laschinger, 2013), mental health symptoms (Spence Laschinger and Fida, 2014b; Read and Spence Laschinger, 2015; Spence Laschinger et al., 2015), perceived work stress, stress symptoms (Rahimnia and Sharifirad, 2015), emotional exhaustion (Spence Laschinger et al., 2013; Spence Laschinger and Read, 2016), cynicism (Spence Laschinger et al., 2013), burnout (Wong and Cummings, 2009), job turnover intentions (Spence Laschinger et al., 2012; Spence Laschinger and Fida, 2014a; Fallatah et al., 2016) and career turnover intentions (Spence Laschinger and Fida, 2014a). The studies included a variety of study populations, settings, organisations and work sectors.

Part of the mediating factors in these studies were individual issues, such as personal and social identification (Wong et al., 2010; Fallatah et al., 2016), occupational coping self-efficacy (Spence Laschinger et al., 2015; Fallatah et al., 2016), psychological capital (Spence Laschinger and Fida, 2014b), trust in organisation (Stander et al., 2015), trust in manager (Wong and Cummings, 2009; Wong et al., 2010), person-job match (Bamford et al., 2013; Spence Laschinger et al., 2015; Spence Laschinger and Read, 2016), optimism (Stander et al., 2015), empathy (Mortier et al., 2016), job satisfaction (Spence Laschinger et al., 2012), work engagement (Giallonardo et al., 2010; Wong et al., 2010), attachment insecurity (Rahimnia and Sharifirad, 2015), emotional exhaustion (Spence Laschinger et al., 2012; Spence Laschinger and Fida, 2014a, 2014b), cynicism (Spence Laschinger et al., 2013), burnout (Wong and Cummings, 2009), job turnover intentions (Spence Laschinger et al., 2012; Spence Laschinger and Fida, 2014a), empathy (Mortier et al., 2016), job satisfaction (Spence Laschinger et al., 2012), work engagement (Giallonardo et al., 2010; Wong et al., 2010), attachment insecurity (Rahimnia and Sharifirad, 2015), emotional exhaustion (Spence Laschinger et al., 2012; Spence Laschinger and Fida, 2014a, 2014b), cynicism (Spence Laschinger et al., 2013), burnout (Wong and Cummings, 2009), job turnover intentions (Spence Laschinger et al., 2012; Spence Laschinger and Fida, 2014a), were more connected to the work community and environment.

3.2.2 Patient care quality. The second research theme was patient care quality (Table II). The studies in this category included research on AL’s relationship with patient care quality (Wong et al., 2010; Boamah et al., 2016), patient safety performance (Stevens et al., 2014) and adverse patient outcomes (Wong and Giallonardo, 2013). The mediating factors were individual issues, such as job satisfaction (Boamah et al., 2016), work engagement (Wong et al., 2010), trust in manager (Wong et al., 2010; Wong and Giallonardo, 2013), personal and social identification (Wong et al., 2010), work–life interference and burnout, and on the other hand, communal, such as structural empowerment (Boamah et al., 2016), areas of work life (Wong and Giallonardo, 2013) and short-staffing (Boamah et al., 2016).
3.2.3 Work environment. The third research theme was work environment (Table III). This theme included research on AL’s relationship with organisational citizenship behaviour (Coxen et al., 2016), interprofessional collaboration (Spence Laschinger and Smith, 2013; Regan et al., 2016), organisational culture and healthy work environment (Shirey, 2009). The only mediating factor mentioned was workplace trust (Coxen et al., 2016).

3.2.4 AL promotion. The fourth research theme was AL promotion (Table IV). This theme included research on how AL can be advanced in organisations. The studies included research on identifying the benefits of team simulations for AL (Shapira-Lishchinsky, 2014) and becoming and remaining authentic nurse leaders (Murphy, 2012).

3.3 Research methods
The analysis mapped the research methodology of the included studies (Tables I-IV). Of the 29 studies, 24 had a cross-sectional design (i.e. CSD), two had time-lagged design and three had longitudinal design. The majority of the 29 included studies were conducted using quantitative research methodology (n = 25). In the quantitative studies, the data collection was performed with single or two-wave surveys using original or secondary data. The surveys included the authentic leadership questionnaire (ALQ) (n = 20), the authentic leadership inventory (ALI) (n = 4), and the leadership practices inventory (LPI) (n = 1). ALQ was developed by leading AL researchers (Walumbwa et al., 2008). ALI measures the same matters as the ALQ (Neider and Schriesheim, 2011). LPI (Kouzes and Posner, 2012) can be used to measure AL behaviour (Wong and Cummings, 2009), but it is not developed especially for AL theory. The quantitative studies used a variety of statistical analyses. Qualitative research methodology was used in few studies (n = 3). In these studies, the data were collected with team simulations and interviews. The qualitative studies used qualitative data analysis based on grounded theory, narrative inquiry and thematic analysis methods in analysing the data. There was also a mixed methods study. The data in the mixed methods study were collected with surveys and/or interviews. The study used thematic and comparative analysis.

4. Discussion
This scoping review was conducted to map relevant research of AL in health care to identify potential research gaps and present recommendations for future research. Although AL has been studied internationally in the health-care context (Stander et al., 2015), the research has not been comprehensive (Spence Laschinger et al., 2013). This review has potential to guide the future research on this subject as it identified several research gaps related to study characteristics, research themes and research methodologies. The included studies emphasised the many positive effects AL has on health-care organisations. The key findings can be seen in Tables I-IV.

This review analysed the main characteristics of the included studies. More versatile research characteristics might increase the generalisation of the results (Bamford et al., 2013) and bring more comprehensive view of AL in health care. Nurses were the most common study population in the included studies. While studying nurses’ perspectives is highly advisable, other occupational groups in health care should be studied as well, as different professions have their own special characteristics. The studies examined mostly subordinates and so it would be fruitful to study AL more on the leaders’ perspectives. Hospitals and acute care settings appeared frequently in the studies. Most of the included articles did not include information of the work sectors in question. More research is needed on AL in many different organisations, settings and work sectors, such as small clinics and large chain organisations in the public, private and third sectors. The majority of the
included studies were conducted in Canada, and consequently more research would be justified to perform in other geographical regions, such as Europe. In addition, the existential–experiential perspective on AL (Koskiniemi et al., 2015) might bring different and more critical views in future research. Furthermore, the critique of AL (Gardiner, 2011; Algera and Lips-Wiersma, 2012) might be reasonable to address in the future research because it might help to develop the theory or at least expand the understanding of AL.

The review presented four research themes composed of studies with a variety of research purposes. Well-being at work, patient care quality and work environment are important research themes as leadership can influence all of them (Shirey, 2006; Wong and Giallonardo, 2013; Nelson et al., 2014). It is also very likely that AL promotion influences these other themes as AL has been found to have many positive effects on organisations (Tables I-III).

Well-being at work was the most common research theme among the included studies. Working in health-care organisations can be psychologically challenging (Boamah et al., 2016). If staff’s well-being is not looked after, it might lead to severe problems, such as burnout (Spence Laschinger and Read, 2016) and turnover intentions (Fallatah et al., 2016). However, if health-care staff experiences well-being at work, it might lead to positive outcomes, such as creativity (Malik et al., 2016), optimism and trust (Stander et al., 2015). AL is found to influence health-care staff in many positive ways (Malik et al., 2016; Mortier et al., 2016). This is probably why this research theme has been so studied. Well-being at work is a popular and important research theme and these included studies may have valid implications for future research (Table I).

Patient care quality and work environment were medium-sized research themes. Studying AL’s influence on patient outcomes is reasonable (Bamford et al., 2013), as AL can have an influence on patient outcomes (Wong and Giallonardo, 2013). Patient care quality might be one of the most central themes for AL research because patient care can be seen as the centre of the entire health-care system. Patient care is so crucially important that nowadays it is usually strictly regulated in legislation.

AL has also been discovered to enhance healthy work environments (Shirey, 2006), which is why the third research theme is important as well. The previous studies have shown that AL may enhance interprofessional collaboration (Spence Laschinger and Smith, 2013; Regan et al., 2016) which is one of the central ways AL influences work environment. We think interprofessional collaboration in health care is a very topical and popular study subject that could be studied even more in the AL context. Besides, work environment itself in health-care context is a wide concept that might bring a lot more perspectives to the AL research.

AL promotion was the smallest research theme. There is a need for more studies concerning AL development in the health-care context. The positive outcomes that AL fosters, cannot be gained without first promoting and developing AL in the organisation. Thus, health-care organisations need more information and advice on how to promote AL. Studying this research theme may develop ideas of leadership training programs (Bamford et al., 2013).

Another interesting theme for research in health care might be AL’s distinction between other leadership theories. The future research should put a lot more emphasis on the reasons why AL is often seen as a superior leadership theory especially in health care. There is a need for more profundity and justification on this topic. AL’s relationship with organisational profitability and customer orientation might be relevant research themes as well.
Almost all the included studies used quantitative research methodology. ALQ (Walumbwa et al., 2008) is clearly a generally accepted instrument as it has been used in numerous studies (Tables I-III). The ALI could be used more in the future because it was developed more recently and has even considered criticism towards the ALQ (Neider and Schriesheim, 2011). The LPI (Kouzes and Posner, 2012) was not developed for AL theory, so it is debatable whether this instrument should be used. AL is still a relatively new study subject and consequently many different research designs should be used (Avolio et al., 2004). Qualitative research on health-care organisations may bring understanding which quantitative research cannot produce (Caronna, 2010). Mixed methods studies on the other hand may have great synergy advantages (Padgett, 2012). Thus, more qualitative and mixed methods studies might bring new angles and research themes to the subject area. In addition, longitudinal designs could be used more to investigate changes over time (Padgett, 2012).

This scoping review has limitations. The review included only peer-reviewed original research articles, thus excluding all other information sources which could have possibly contained potential information about this subject. The review included only English language articles and so more relevant studies could have been found in other languages.

5. Conclusions
This is presumably the first literature review to examine and map evidence on AL in a health-care setting with a broad approach. The review analyses the main characteristics of the included studies, presents four research themes and examines the methodologies of the studies. The results of this review are available for designing future research on this subject. Researchers from various countries interested in health-care leadership may find these results usable in their work. In addition, researchers interested in AL may find it useful to perceive the AL research in a health-care context.

The review identified several research gaps. Firstly, there is a need for more variation in study populations, settings, organisations, work sectors, geographical origins and theory perspectives. Nurses were notably the most common study population in the included studies. Other occupational groups in health care should be studied as well. Secondly, more research is needed on different research themes, especially AL promotion, patient care quality and work environment. The distinction between AL and other leadership theories and its relationship with organisational profitability and customer-orientation might also be interesting themes. The future research should put a lot more emphasis on the reasons why AL is often seen as a superior leadership theory especially in health care. Thirdly, different research methodologies, such as qualitative and mixed methods research and longitudinal designs, should be used more.

References


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