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Measuring Advanced Practice in Health Visiting: Development and Psychometric Testing of the Health Visiting Advanced Practice Scale in Public Health Nursing

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ABSTRACT

Background: The debate about whether health visiting, a specialist community public health nursing role, is at the level of advanced practice nurse has gone on for more than a decade. There is little empirical evidence that the role matches the traditional role of an advanced practice nurse, although many of the attributes of advanced practice nursing such as prescribing rights, managing complex cases, caseloads with undifferentiated need and advanced assessment and decision-making are certainly present.

Aim: The current study aimed to develop, refine and test the Health Visiting Advanced Practice Scale to assess the scope of advanced practice of UK health visitors.

Design: A cross-sectional and methodological scale validation design, following classical test theory.

Methods: The design consisted of three phases; the first involved scale development including item generation, phase two assessed the content validity index, and the third phase involved a cross-sectional survey to establish construct validity, content validity, and internal consistency reliability, and conduct exploratory and confirmatory factor analysis.

Results: The initial 44-item scale underwent iterative exploratory and confirmatory factor analyses, leading to a refined 5-factor structure with 29 items covering domains such as family-centred care, leadership, prescribing, diagnostic reasoning, and professional practice. This final version demonstrated strong reliability and construct validity in the EFA but mixed fit indices in the CFA, supporting both internal consistency and validity of the scale.

Conclusion: The final scale offers a rigorously validated tool for assessing advanced practice among UK health visitors, capturing core domains such as family-centred care, leadership, prescribing, and diagnostic reasoning. By bridging theoretical frameworks with real-world practice, it fills a critical gap in evaluating and supporting the professional scope of this public health nursing specialty.

Impact: These findings provide valid and reliable insights for measuring and improving health visitors' advanced practice and developing future professional policies.

Patient or Public Contribution: No patient or public contribution.

Reporting Method: STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines for cross-sectional studies.

1 | Introduction

Despite more than a decade of debate about advanced nursing practice in health visiting, the notion of what it encompasses remains difficult to define (Institute of Health Visiting 2023; Baldwin 2013). Health visiting is a specialist nursing role in the United Kingdom (UK) and several other countries around the world. Models of health visiting can be found in Denmark, Norway, Finland, Pakistan, New Zealand and Australia, although it is often not recognised as advanced practice nursing. While other countries have public health nursing roles which perform some of the similar functions (Global Network of Public Health Nursing 2023), UK health visitors are focused on promoting the health and wellbeing of families guided by an orientation to practice concerned with salutogenesis (health creation), person centeredness (human valuing) and the situation of each person (human ecology) (Cowley et al. 2015). Health visiting, alongside other specialist community public health nursing specialisms, requires preparation at master's degree level, and the role encompasses direct care, leadership and interagency collaboration, education and the use of evidence to inform both policy and interventions. Health visiting services differ across the four UK devolved nations, but they all have a fundamental element of universal service provision alongside more targeted and specialist interventions (Fanner et al. 2025; Morton 2024). Most services work with babies, children and families between the ages of 0 and 5 years undertaking a range of mandated and suggested screening and support visits. These visits are focused on six key early years high impact areas: supporting the transition to parenthood, maternal and family mental health, breastfeeding, nutrition, accident prevention and managing minor childhood illnesses (Morton 2024). Given the important role of childhood and early years in shaping future health, health visitors make a significant contribution to the health of the nation through early intervention and the prevention of problems associated with inequalities in health (Morton 2024).

Health visiting is sometimes regarded as a separate profession from nursing (Cowley 2014). A position informed by its early social health origins, previous regulatory arrangements and current salutogenic, person-centred and ecological focus on public health and social determinants of health. UK legislative changes and the passing of the Nursing and Midwifery Order 2001 removed the title health visitor from statute. The newly formed regulator identified health visiting as a registered specialist nursing qualification that required existing registration as a nurse or midwife. Health visiting is therefore regarded as a specialist public health nursing role. Ervin (2007) argued that as advanced practice nursing evolved, community health roles and those working in public health were seen as a 'misfit' or an 'outlier' because of their focus on population and community health. Others such as Young and Shamansky (1985) argued that public health nursing was clearly an advanced practice role from the outset, as these roles, by definition, plan and deliver care to individuals, families and communities in complex environments at the public health level, which encloses complex interactions with several services, institutions and authorities in community settings (Kneipp 2025). The absence of medical practitioners in health visiting means that the advanced practice nature of the role has developed in a different way as it does not involve medical substitution.

2 | Background

Health visiting, as a specialist nursing role, delivers public health interventions predominantly to children and families either on an individual basis in the home environment or at a community level through children centres, family hubs and clinic-based interventions. The International Council of Nurses (ICN 2020; p6) describes advanced practice nursing as "advanced nursing interventions that influence clinical healthcare outcomes for individuals, families and diverse populations". At the same time, the ICN guidelines (ICN 2020) make it explicit that an advanced practice nurse can either be a specialist or a generalist, and the title encompasses nurse practitioners, clinical nurse specialists and other specialist roles. Irrespective of the nomenclature, advanced practice nursing has a role in the provision of care and illness prevention at an advanced level beyond the scope of practice of a generalist or specialist nurse. Individuals practicing at this level manage complex issues and provide care to seldom-heard, vulnerable and at-risk populations. Advanced practice nursing involves advanced assessment, judgement and decision making, alongside the authority to prescribe medicines, order or interpret diagnostic tests and refer to other services and professionals. While health visitors provide universal services, their targeted and specialist support is often prioritised to families with a range of health and social complexities and/or vulnerabilities, including seldom-heard populations such as traveller communities and those living in temporary accommodation. In the UK, health visitors have the right to prescribe a limited range of medicines for childhood ailments and provide screening, treatment planning, care and support in partnership with families who find themselves in complex situations. The role of the health visitor is akin to that of a clinical nurse specialist by virtue of them autonomously working with a very specific client group supporting child health and development through a significant period.

Given the complexity of roles and commissioning variation related to advanced practice nursing, it is not surprising that attempts have been made to delineate roles and to examine the scope of practice of a range of practitioners, particularly to inform workforce retention and improve services for families. Several international studies have explored the scope of practice and the definitional boundaries of advanced practice nursing, often distinguishing nurse practitioners (NPs) from clinical nurse specialists (CNSs) through various methodological approaches (Gardner et al. 2016; Jokiniemi et al. 2022; Carryer et al. 2018). These investigations employed tools such as Delphi surveys, cross-sectional studies and role delineation instruments. Among the most widely utilised role delineation instruments is the Advanced Practice Role Delineation (APRD) Tool, derived from the Strong Model of Advanced Practice developed for acute care NPs (Ackerman et al. 1996). The APRD

Key Points—Summary

- What Does This Paper Contribute to the Wider Global Clinical Community?
  - Provides the first validated scale to assess advanced practice in health visiting, addressing a gap in the public health nursing roles globally.
  - Enables the international comparison of advanced nursing practice in health visiting, facilitating international policies to promote advanced practice in healthcare and public health.
  - Highlights health visiting as advanced practice of nursing with specific focus on breaking the cycle of deprivation and on reducing health inequalities.

Tool consists of 41 activities across five domains including direct care, support of systems, education, research and publication and professional leadership. The tool measures the frequency with which each aspect is performed using a five-point Likert scale (Gardner et al. 2016).

Gardner et al. (2016) applied the APRD Tool in a cross-sectional survey in Australia, revealing that nurses at an advanced level consistently scored highly across all domains. Nurse practitioners demonstrated significantly higher scores in direct care, while other advanced nurses showed elevated performance across education, leadership and system support when compared to registered nurses and healthcare managers. In Hong Kong, Jokiniemi et al. (2022) reported that nurse consultants outperformed other roles across all five domains, particularly in support of systems, education and leadership. A similar study in New Zealand showed nurse practitioners and CNSs scored comparably, though NPs had marginally stronger scores in direct care and leadership (Carryer et al. 2018).

The APRD Tool was later adapted in Finland into the Modified Strong Model of Advanced Practice (MoSMAP), expanding to 45 items (Jokiniemi et al. 2021). In testing among registered nurses, midwives, CNSs and NPs, findings indicated midwives led in direct care scores, while CNSs excelled in system support, research and leadership. Comparative psychometric analyses found the MoSMAP displayed superior construct validity over the original APRD Tool (Jokiniemi et al. 2022).

Despite the proliferation of instruments, gaps remain in evaluating role distinctions across clinical environments. Little work has been undertaken in community healthcare or indeed in specialist hospital settings. Unsworth et al. (2025) developed and validated the Family and Community Nursing Advanced Practice Scale finding that nurses working in family practice had comparable roles to those working in the wider community. This role homogeneity was surprising given that family practice APNs were often dealing with undifferentiated diagnosis on a regular basis when compared to staff working with people who are homeless in the wider community. Another instrument tested in primary care settings in Brazil (Dias et al. 2025) highlighted similar domains of advanced practice among nurses working in primary health centers, spanning from leadership to clinical practice, to education and health promotion. Another study (Jafari Pour et al. 2024) found that advanced practice nurses in critical care settings primarily engage in direct care, with limited involvement in education and leadership. Such findings underscore the influence of clinical context on practice priorities and reinforce the need for a wider range of assessment tools and scales.

While several models describe the expected domains of advanced practice and some existing scales or tools partially capture some areas of advanced competence in public health nursing or health visiting, none of them are specific to this professional profile and area of care. Therefore, there is a gap in the literature about how best to empirically assess the degree of fit with advanced nursing practice of these roles by also considering the specific, advanced practice competences of health visitors in real-world contexts.

3 | The Study

3.1 | Aims and Questions

The aim of the study was to develop and test the psychometric characteristics of a new scale to delineate the advanced practice role of health visitors.

4 | Methods

4.1 | Study Design

This study employed a cross-sectional and methodological scale validation design, following the Classical Test Theory (CTT) (DeVellis and Thorpe 2021).

The study consisted of three phases: the first of which involved scale development including item generation. Phase two then assessed the Content Validity Index (CVI) with an expert panel. The third phase involved a cross-sectional survey to test the psychometric properties of the scale and in detail: reliability and construct validity (Exploratory and Confirmatory Factor Analysis).

4.2 | Scale Development

4.2.1 | Phase I: Item Generation

Item generation used both deductive and inductive methods. Existing proficiency frameworks from the Nursing and Midwifery Council (NMC 2022), and in advanced practice in child health from the Royal College of Paediatrics and Child Health and NHS England (2024), alongside literature about the role of the health visitor were used to generate an initial range of 42 items. Once generated, these items were then mapped to the Hamric model (Hamric et al. 1996), the Nursing and Midwifery Board for Ireland domains (Nursing and Midwifery Board of Ireland 2017), and the ESCO competencies (European Commission 2017) using a matrix to ensure comprehensiveness and international relevance. An initial panel of 5 experts in health policy, education, psychometrics and health visiting then

reviewed the items' relevance regarding health visiting and readability, suggesting items were reworded for clarity to avoid ambiguity and colloquialisms and to split double-barrelled items. Revised items were then checked to remove any duplicates, and the mapping to the models and frameworks was revised to ensure a proper professional and organisational adaptation. The final total item list was 44 items.

4.2.2 | Phase II: Content Validity

After the research team finalised the items, a panel of ten health visiting experts (from health visiting practice, education and service delivery) were invited to assess the content validity. Each item was evaluated for relevance and clarity using a 4-point Likert scale (ranging from "not relevant" to "very relevant" and "not clear" to "very clear"). An item was considered relevant or clear if the experts rated it as a 3 or 4 ("relevant/very relevant" or "clear/very clear"). Based on the experts' feedback, minor revisions were made to the wording of some statements. In detail, the assessment and history taking items were contextualised for health visiting practice to include developmental assessments and observation of behaviour. Several items were clarified particularly those relating to differential diagnosis and the ordering of diagnostic tests. Examples were provided relevant to health visiting e.g., differential diagnosis of a rash or bruising. Examples were also provided for prescribing and social prescribing, such as referral to a mother and child group were added as an additional separate item.

To determine the scale's content validity, the Scale-Level Content Validity Index (S-CVI) was computed by averaging the Item-Level Content Validity Indices (I-CVI). Following Polit and Beck's (2006) recommendation, an S-CVI threshold of 0.83 was applied.

4.2.3 | Phase III: Psychometric Testing

In phase 3, the scale was administered to a sample of Health Visitors. Descriptive statistics, internal consistency, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were performed to assess the scale's psychometric properties and ensure sufficient reliability and construct validity.

The scale included 44 items; each measured on a 5-point Likert response scale ranging from 5. 'very great extent' to 4. 'great extent', 3. 'some extent', 2. 'little extent' and 1. 'not at all'. These analyses tested the scale's structural validity and internal consistency.

4.3 | Study Setting and Sampling

The target population consisted of registered specialist community public health nurses (health visitors) working as health visitors within the United Kingdom. Eligible participants were required to hold a specialist community public health nursing (health visiting) qualification and have at least one year of professional experience as a health visitor. Additionally, they needed to be actively practising at the time of data collection for at least one day per week.

The sample size was determined based on participant-to-item ratios recommended for factor analysis (Kline 2023). For Exploratory Factor Analysis (EFA), a minimum of 100 participants and a ratio of 5:1 were considered sufficient, while Confirmatory Factor Analysis (CFA) required at least 10 participants per item. Given the scale's initial 44 items and the need to conduct both EFA and CFA in Phase 3, the target sample size was set at 440 participants.

4.4 | Data Collection

A convenience sampling approach was used for participant recruitment. The survey was hosted on the JISC (Joint Information Systems Committee) online platform, the data technology provider for UK Higher Education, in compliance with the Ethical and data management standards. To enhance participation and engagement, periodic reminders were sent through professional networks, including targeted emails, social media promotions and newsletters. The data collection period took place from February 2025 to April 2025.

4.5 | Data Analysis

The data were analysed using IBM SPSS Statistics version 28.0 for descriptive statistics and exploratory factor analysis (EFA), and Stata version 13 for confirmatory factor analysis (CFA). Psychometric testing followed the COSMIN standards and the process described by Mikkonen et al. (2022) for preliminary analysis, reliability and construct validity (EFA and CFA).

4.5.1 | Preliminary Analysis

Before conducting multivariate analyses, the necessary assumptions were verified. Multivariate outliers were identified through the calculation of Mahalanobis distances and their corresponding p-values in the chi-square distribution. In psychometric studies, the removal of multivariate outliers is considered to satisfy the assumption of multivariate normality and to identify a possible unusual distribution of responses across the scale, potentially indicating biases such as floor or ceiling effects (Kline 2023). Multivariate normality was assessed using Mardia's kurtosis coefficient compared against the critical value, defined as $v\,(v+2)$, where v represents the number of items. A Mardia's kurtosis coefficient below the critical value indicates multivariate normality (Mikkonen et al. 2022). No missing values were observed in the dataset.

4.5.2 | Reliability

Internal consistency was assessed by calculating Cronbach's alpha (α), where values greater than 0.90 indicated excellent reliability, between 0.70 and 0.90 represented good reliability, between 0.60 and 0.70 indicated acceptable, and below 0.60 was considered unacceptable (DeVellis and Thorpe 2021). McDonald's omega (ω) was also calculated, with values exceeding 0.60 generally considered acceptable, though values above 0.80 are considered preferable (Mikkonen et al. 2022).

Items were considered for removal under two conditions: first, if the deletion of an item resulted in an increase of more than 0.10 in either reliability coefficient (α or ω) and second, if the item-to-total correlation was below 0.30 (DeVellis and Thorpe 2021).

4.5.3 | Exploratory Factor Analysis (EFA)

The EFA was conducted using principal axis factoring with direct oblimin rotation, as the scale measured behavioural and psychosocial components with expected factor correlations exceeding 0.2 (Mikkonen et al. 2022). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, with values between 0.8 and 1.0, alongside a statistically significant Bartlett's test of sphericity ($p < 0.05$), was tested to confirm the suitability of the data for factor analysis (DeVellis and Thorpe 2021).

Items were removed based on two criteria: primary factor loadings below 0.30 or a difference of less than 0.20 between an item's highest and second-highest factor loadings. The cross-loading difference was calculated using the absolute values of the loadings (DeVellis and Thorpe 2021).

4.5.4 | Confirmatory Factor Analysis (CFA)

The CFA model fit was evaluated using the following indices and thresholds: root mean square error of approximation (RMSEA) and standardised root mean square residual (SRMR) values below 0.08 were considered acceptable, while the comparative fit index (CFI) and Tucker-Lewis index (TLI) values above 0.90 indicated good model fit (Kline 2023).

4.5.5 | Descriptive Statistics

Categorical variables were summarised as frequencies and percentages. For continuous variables and scale items, the mean, standard deviation (SD), range, skewness and kurtosis were calculated.

4.6 | Ethical Considerations

The study procedures were designed to ensure data confidentiality and compliance with national and European data protection regulations, including the General Data Protection Regulation (2018) and the UK Data Protection Act (2018). All electronic data were stored securely in password-protected systems, with access restricted exclusively to the principal investigator and authorised members of the research team. Prior to survey completion, participants were presented with a comprehensive information sheet on the initial page, outlining the study's purpose, data handling protocols and their rights as research participants. Submission of the completed survey was taken as implicit consent to participate in the study. Ethical approval for this research was granted by the Institutional Review Board at Northumbria University (Reference number: 7020; Date of approval: 14 August 2024).

5 | Results

5.1 | Phase 1: Item Generation

A total of 44 items were generated and then mapped back to the original models with 14 items in the direct clinical care and decision-making domain, 3 in communication, 3 in evidence-based practice, 5 in ethical decision-making, 6 in guidance and prevention, 3 in collaboration, 5 in educating others and 5 in team leadership and management (Supplementary File 01). Each item was considered by the research team and revised to ensure that it was linked to a single domain and was easily understood. Supplementary File 01 reports the items generated in this phase and their link to Nursing and Midwifery Council proficiencies (NMC 2022), the Royal College of Paediatrics and Child Health and NHS England (2024) framework, Hamric's model (Hamric et al. 1996), the Nursing and Midwifery Board for Ireland model (Nursing and Midwifery Board of Ireland 2017) and the ESCO standards (European Commission 2017).

5.2 | Phase 2: Content Validity

A panel of ten experts was involved in evaluating the relevance and clarity of each item to assess the HVAPS structure and content. The initial set of items demonstrated a S-CVI of 0.93 for relevance and 0.94 for clarity with no single item below 0.7. The set of items generated in phase 1 did not require any modification or deletion for clarity and relevance following the content validity assessment. The final version of the scale included 44 items, rated on a Likert scale from 1 (not at all) to 5 (very great extent).

5.3 | Phase 3: Psychometric Testing

5.3.1 | Preliminary Analysis: Multivariate Normality

The study initially recruited 692 participants who completed the survey. Initial assessment revealed a Mardia's kurtosis coefficient of 2863.253, which exceeded the critical threshold of 2024 (calculated as 44×46, where 44 represents the number of scale items). Evaluation of Mahalanobis distances identified 90 multivariate outliers. Following their removal, Mardia's kurtosis coefficient reduced to 1510.218, thereby satisfying the assumption of multivariate normality (Mikkonen et al. 2022). Independent samples *t*-tests demonstrated that multivariate outliers had statistically significantly lower scores compared to normally distributed records. This pattern was consistent with a flooring effect in the response distribution, supporting the decision to exclude these cases from subsequent analyses. The final sample for psychometric testing comprised 602 participants following the removal of outliers.

5.3.2 | Sample Description

The final sample consisted of 602 participants. The mean age was 49.16 years (SD = 9.16), with ages ranging from 23 to 72 years. The sample was predominantly female (98.3%, $n = 592$). On average, participants had been qualified as health visitors for 12.90 years (SD = 9.02) and had been qualified as nurses for 22.51 years (SD = 10.93). The majority of

participants worked full-time (59.5%, $n = 358$), while 40.5% ($n = 244$) were part-time.

In terms of clinical practice, 40.9% ($n = 246$) provided care to families 5 or more days per week and 27.4% ($n = 165$) 4 days per week. The remaining 31.7% ($n = 191$) provided care for families 3 or less days per week.

The highest qualifications declared by the participants were at the post-graduate level (65.3%, $n = 393$) and the remaining at the undergraduate level. A large majority (83.2%, $n = 501$) held a prescribing qualification.

5.3.3 | Scale Validation: Descriptives, EFA and CFA

The initial version of the scale, as developed in phase two, was tested through an EFA conducted on the initial set of 44 items. The adequacy of the sample for factor analysis was supported by a Kaiser-Meyer-Olkin (KMO) measure of 0.946 and a statistically significant Bartlett's test of sphericity ($\chi^2 = 17164.587$, $p < 0.001$). In detail, an 8-factor solution, accounting for 64.59% of the total variance, was identified. Several items, and specifically, items 10, 3, 1, 14, 20, 23 and 36, displayed substantial cross-loadings, while items 34 and 14 had factor loadings below the threshold of |0.30|. Accordingly, the deletion of these items was recommended (Table 1).

Following the removal of these items, a revised six-factor solution comprising 34 items was identified and tested (Table 2). However, one of the factors in this solution included only one item (item 22), leading to a factorial structure both psychometrically and theoretically unsatisfactory. Additional cross-loadings emerged, particularly with items 16, 18, 21, 19 and 22, suggesting their removal (Table 2). The subsequent analysis produced a 5-factor solution consisting of 29 items (Table 3). In this final structure, Factor 1 comprised 8 items, with the domain labelled as "working with and for families", while Factor 2 (8 items) aggregated into the domain "leading, managing and influencing". Factor 3, with 3 items, was interpreted as representing the domain of "prescribing interventions", whereas Factor 4, also comprising 3 items, was named "diagnostic reasoning". Factor 5 included 7 items which was named "professional practice". Items 10 and 6, located in Factors 3 and 4 respectively, demonstrated marginal cross-loadings. Both were retained to preserve the psychometric consistency of the factor structure, ensuring each domain was represented by a minimum of 3 items, and to maintain theoretical coherence across the domains.

All factors demonstrated satisfactory reliability, with Cronbach's alpha and McDonald's omega values exceeding 0.70. Specifically, Factor 4 had $\alpha = 0.71$ and $\omega = 0.74$, while the remaining factors showed values above 0.80 for both scores. The scale achieved reliability coefficients of 0.89 for both Cronbach's alpha and McDonald's omega. Item-to-total correlations and the analyses of alpha and omega coefficients upon item deletion confirmed the internal consistency of the final version of the scale (Table 4). This 5-factor solution accounted for 63.99% of the total variance, demonstrating a more parsimonious and equally robust representation of the construct compared to the initial 8-factor solution.

To assess construct validity, a Confirmatory Factor Analysis (CFA) was conducted on the 5-factor structure. The model fit indices indicated borderline levels of fit, with RMSEA = 0.088, SRMR = 0.069, CFI = 0.843 and TLI = 0.827.

6 | Discussion

The results map to a five-factor scale with good internal consistency (alpha 0.89 and omega 0.88). The first factor relates to working with and for families, and each item has a relatively high mean score with the average across all eight items of 4.80. Unsurprisingly, working with families with intergenerational experiences of poor health and deprivation shows strong items' loadings and scores, as does working with families during the perinatal and childhood periods. These two areas are core to the work of the health visitor. It is evident that childhood experiences have an impact on an individual's health throughout their life and children who are exposed to poverty, deprivation and poor diet are more likely to be impacted by cardiovascular diseases and cancer (Mallorie 2024). For many families, the intergenerational nature of poverty, deprivation and ill health is perpetuated and health visitors are core to identifying interventions which can break this cycle (Hardcastle and Bellis 2019). This work often involves complex assessment of adverse childhood events experienced by parents and dealing with household issues such as domestic violence, mental health problems, alcohol and drug misuse and abuse and neglect. While some of the root causes of intergenerational ill health and deprivation cannot be resolved by health visiting alone, through community-based interventions and education, health visitors are able to promote dental health, good diet, child development, as well as supporting access to healthcare services (Institute of Health Visiting 2019). Safeguarding also features in this factor, with working within policy and legal frameworks and responding to safeguarding concerns grouping alongside interagency working. The universal nature of health visiting services means that it is ideally placed to identify children in need and children who are potentially at risk of harm. This is done through the sensitive search for health needs, observation of family dynamics and parent and infant attachment (Institute of Health Visiting, SAPHNA and Association of Directors of Public Health 2024). The focus is then on early interventions to facilitate health enhancing support to the family to prevent any such harm from occurring. Of course, health visitors do not do this alone, instead collaborating with colleagues from social services and from the health service. In addition to managing complex safeguarding situations, health visitors often provide support to families in need who fall below the threshold for referral. This work is quite intensive, and alongside parental mental health and child behaviour problems, it makes up a considerable proportion of the health visiting workload (Institute of Health Visiting 2025a). The items in factor one form a large proportion of health visiting direct care, which requires the use of expertise, advanced assessment skills and the management of highly complex individual and family circumstances.

The second factor relates to leading, managing and influencing, and consists of eight items which incapsulate leading and team co-ordination, supporting the education and development of others, managing distributed risk and influencing

TABLE 1 | Initial exploratory factor analysis (principal axis factoring, rotation: direct oblimin, KMO = 0.946, Bartlett's test: $\chi^2 = 17164.587$, df = 946, $p < 0.001$).

Items	Factor								Cross-loading difference[a]
	1	2	3	4	5	6	7	8	
30. Engage individuals and families experiencing an intergenerational cycle of poor health and deprivation in education about prevention and health promotion	**0.667**	0.110	−0.019	0.033	−0.071	−0.056	0.050	−0.006	0.56
29. Use interpersonal skills to support individuals experiencing an intergenerational cycle of poor health and deprivation	**0.639**	0.092	0.018	0.009	−0.144	−0.059	0.108	−0.036	0.49
32. Collaborate with other health and social care professionals to ensure continuity of care across agencies	**0.603**	0.005	−0.012	0.017	−0.050	−0.025	0.231	0.090	0.37
28. Provide individuals and families with accessible information relevant to their situation and health status during the perinatal and early childhood period	**0.491**	0.063	−0.005	0.011	−0.258	0.043	0.160	0.005	0.23
33. Refer to other services as part of interagency collaboration to achieve whole system approach to care provision	**0.477**	0.014	−0.022	0.004	−0.063	0.011	0.339	0.109	**0.14**
27. Empower individuals and families to identify achievable goals in the perinatal and early childhood period	**0.468**	0.043	−0.046	0.019	−0.247	−0.054	0.143	0.039	0.22
31. Promote health and proactively deliver prevention strategies in the community	**0.427**	0.135	0.141	0.030	0.091	−0.180	0.065	−0.023	0.25
26. Identify modifiable risk factors	**0.420**	−0.041	0.064	−0.012	−0.042	−0.180	0.280	0.083	**0.14**
38. Adjust own practices for the benefit of continual improvement in the work environment	**0.305**	0.118	−0.045	0.032	0.007	−0.251	0.061	0.272	**0.03**
34. Provide expert advice to other healthcare professionals concerning the perinatal and early childhood period	**0.252**	0.135	−0.032	0.123	0.008	−0.210	0.041	0.240	**0.01**
43. Influence health policy based on your expertise of community health needs assessments	0.024	**0.829**	0.081	0.020	−0.022	−0.069	−0.013	−0.122	0.71
44. Lead service changes by considering sustainable health care (e.g., care which addresses health needs without causing damage to environmental and other resources for future generations and that aligns with UN sustainable development goals)	0.001	**0.767**	0.056	0.076	0.011	−0.067	−0.053	0.017	0.69
39. Influence and negotiate changes to service delivery to optimise population health outcomes in the perinatal and early childhood period	0.128	**0.691**	−0.013	0.003	−0.017	−0.106	0.009	−0.010	0.56
40. Lead clinical practice to improve care quality	0.019	**0.678**	0.009	0.029	−0.027	0.029	0.019	0.243	0.44

(Continues)

TABLE 1 | (Continued)

Items	Factor								Cross-loading difference[a]
	1	2	3	4	5	6	7	8	
41. Co-ordinate the team to ensure quality of care	0.002	**0.664**	0.046	0.038	−0.024	0.141	0.007	0.254	0.41
42. Manage distributed risk (risk which is not under your direct control and is created by others)	0.114	**0.550**	0.069	0.019	−0.033	−0.002	−0.007	0.167	0.38
4. Order diagnostic tests in response to identified concerns e.g., bilirubin in prolonged jaundice in newborns	0.028	0.015	**0.760**	−0.043	0.035	0.049	0.055	−0.019	0.70
5. Interpret the results of those diagnostic tests	−0.085	0.095	**0.745**	0.060	0.072	−0.027	0.019	−0.040	0.65
6. Develop a list of possible causes e.g., for a rash or bruising (differential diagnosis) and revise in accordance with the findings from the individual's history, observation of parent-infant interaction; physical examination and diagnostics	−0.036	−0.003	**0.444**	0.089	−0.169	−0.178	−0.006	0.039	0.27
9. Review and amend existing prescribed medication under the direction of a medical practitioner e.g., emollients	−0.012	0.003	−0.042	**0.960**	0.046	0.032	0.036	−0.100	0.86
8. Prescribe medication to treat common health problems e.g., for fungal infections or infestations	−0.064	0.013	−0.014	**0.829**	0.040	0.026	0.041	0	0.76
10. Prescribe or delegate non-pharmacological interventions e.g., social prescribing.	0.074	−0.073	0.152	**0.352**	−0.086	−0.063	−0.112	0.151	**0.20**
11. Provide expert health visiting practice that is tailored to individuals and their families	−0.039	0.021	−0.045	−0.004	**−0.715**	−0.034	0.208	0.059	0.51
15. Develop a person-centred therapeutic relationship with individuals and their families	0.151	0.097	−0.109	0.022	**−0.647**	−0.056	0.133	−0.100	0.50
17. Apply interpersonal skills to work in partnership with individuals and families in the perinatal and early childhood period	0.034	0.032	−0.061	−0.007	**−0.604**	−0.036	0.312	0.040	0.29
7. Use of professional reasoning to make autonomous decisions	−0.038	0.031	0.071	−0.004	**−0.574**	−0.054	0.130	0.078	0.44
13. Deliver tailored prevention interventions to individuals, families and wider communities in the context of health visiting service delivery	0.147	0.138	−0.093	0.018	**−0.543**	−0.116	0.046	−0.070	0.40
16. Support individuals and their families to make decisions about actions and behaviours that impact across the life course	0.245	0.082	−0.078	0.028	**−0.497**	−0.181	0.055	−0.033	0.25
12. Modify practice to manage risk	−0.047	−0.037	0.051	0.026	**−0.467**	−0.228	0.197	0.091	0.24

(Continues)

TABLE 1 | (Continued)

Items	Factor								Cross-loading difference[a]
	1	2	3	4	5	6	7	8	
2. Undertake physical examination and observation to identify health, developmental and behavioural needs	0.072	−0.055	0.163	0.056	**−0.427**	0.020	−0.105	0.014	0.26
3. Undertake an assessment of the parent–child (or infant) interaction	0.288	0.067	0.163	0.065	**−0.374**	0.125	0	0.021	**0.09**
1. Undertake a biopsychosocial history of the family	0.130	−0.079	0.054	0.119	**−0.321**	0.007	−0.110	0.209	**0.11**
14. Co-ordinate care for the parent/caregiver experiencing complex health and social circumstances	0.076	0.222	0.048	0.087	**−0.275**	−0.124	0.010	−0.056	**0.05**
19. Identify potential research and knowledge gaps from day-to-day practice	−0.105	0.185	0.014	0.098	0.012	**−0.618**	0.032	0.009	0.43
22. Address ethical dilemmas by considering the best interest of individuals who are unable to make decisions for themselves	0.202	−0.041	0.089	0.012	0.012	**−0.533**	−0.026	0.059	0.33
21. Use ethical reasoning to make decisions when faced with ethical dilemmas e.g., safeguarding early support or vaccine refusal	0.164	−0.085	0.083	0.024	−0.122	**−0.488**	0.061	0.077	0.32
18. Synthesise evidence to inform clinical practice	0.017	0.017	0.021	−0.014	−0.233	**−0.452**	0.040	0.110	0.22
20. Participate in research activities that address knowledge gaps in practice in the perinatal and early childhood period	−0.047	0.365	0.068	0.106	0.006	**−0.431**	0.013	−0.049	**0.07**
23. Use inclusive and participatory practices to support individuals to exercise their right to good health and thrive in childhood	0.321	0.059	0.043	−0.067	−0.248	**−0.368**	0.054	−0.059	**0.05**
24. Respond to safeguarding concerns working within a policy and legal framework	0.089	−0.058	0.083	0.046	−0.095	0.016	**0.867**	0.021	0.77
25. Be proactive in response to complex safeguarding concerns	0.159	−0.058	0.058	0.059	−0.063	0.006	**0.814**	0.016	0.65
37. Supervise and assess other staff members in developing their competencies	−0.030	0.234	0.028	0.044	0.024	−0.024	0.131	**0.582**	0.35
35. Proactively lead the workplace learning culture and professional development of other staff members	0.042	0.283	−0.046	0.024	−0.028	−0.144	0.010	**0.536**	0.25
36. Devise programmes of learning to support other staff members	−0.074	0.419	−0.052	0.068	−0.030	−0.094	0.021	**0.460**	**0.04**
Eigenvalues	15.589	4.453	2.340	1.485	1.328	1.168	1.039	1.017	
Variance (%)	35.430	10.121	5.317	3.374	3.018	2.655	2.362	2.312	
Cumulative variance (%)	35.430	45.551	50.868	54.242	57.260	59.915	62.278	64.589	

Note: Bold values indicate the highest factor loading for each item and cross-loadings < 0.20.

[a]Cross-loading difference: the difference in absolute values between the highest loading and the second highest loading (threshold <0.20).

TABLE 2 | Exploratory factor analysis for the 6-factor solution (principal axis factoring, rotation: direct oblimin, KMO = 0.932, Bartlett's test: $\chi^2 = 12998.112$, df = 561, $p < 0.001$).

Items	Factor						Cross-loading difference[a]
	1	2	3	4	5	6	
11. Provide expert health visiting practice that is tailored to individuals and their families	**0.829**	0.046	−0.047	0.008	0.084	−0.007	0.74
17. Apply interpersonal skills to work in partnership with individuals and families in the perinatal and early childhood period	**0.707**	0.051	−0.066	0.012	0.132	−0.179	0.53
7. Use of professional reasoning to make autonomous decisions	**0.684**	0.080	0.058	0.001	0.031	0.039	0.60
15. Develop a person-centred therapeutic relationship with individuals and their families	**0.652**	0.004	−0.099	−0.018	−0.012	−0.213	0.44
12. Modify practice to manage risk	**0.636**	0.058	0.075	−0.010	−0.013	−0.045	0.56
13. Deliver tailored prevention interventions to individuals, families and wider communities in the context of health visiting service delivery	**0.519**	0.062	−0.082	−0.019	−0.078	−0.212	0.31
16. Support individuals and their families to make decisions about actions and behaviours that impact across the life course	**0.493**	0.049	−0.074	−0.042	−0.110	−0.323	**0.17**
2. Undertake physical examination and observation to identify health, developmental and behavioural needs	**0.390**	−0.084	0.132	−0.081	−0.079	0.007	0.26
18. Synthesise evidence to inform clinical practice	**0.366**	0.173	0.044	0.012	−0.213	−0.119	**0.15**
21. Use ethical reasoning to make decisions when faced with ethical dilemmas e.g., safeguarding early support or vaccine refusal	**0.304**	0.072	0.087	−0.038	−0.264	−0.250	**0.04**
40. Lead clinical practice to improve care quality	0.000	**0.876**	−0.030	−0.010	0.041	0.026	0.83
41. Co-ordinate the team to ensure quality of care	−0.013	**0.844**	−0.005	−0.026	0.101	0.090	0.74
44. Lead service changes by considering sustainable health care (e.g., care which addresses health needs without causing damage to environmental and other resources for future generations and that aligns with UN sustainable development goals).	−0.086	**0.805**	0.040	−0.042	−0.093	0.028	0.71
43. Influence health policy based on your expertise of community health needs assessments	−0.095	**0.748**	0.072	0.013	−0.099	−0.059	0.65
42. Manage distributed risk (risk which is not under your direct control and is created by others)	0.017	**0.696**	0.042	0.004	−0.010	−0.045	0.65
39. Influence and negotiate changes to service delivery to optimise population health outcomes in the perinatal and early childhood period	−0.052	**0.693**	−0.004	0.029	−0.086	−0.164	0.53
35. Proactively lead the workplace learning culture and professional development of other staff members	0.152	**0.631**	−0.051	−0.029	−0.006	−0.012	0.48
37. Supervise and assess other staff members in developing their competencies	0.118	**0.613**	−0.003	−0.051	0.131	0.024	0.48
19. Identify potential research and knowledge gaps from day-to-day practice	0.119	**0.323**	0.060	−0.073	−0.263	−0.072	**0.06**

(Continues)

TABLE 2 | (Continued)

Items	Factor						Cross-loading difference[a]
	1	2	3	4	5	6	
5. Interpret the results of those diagnostic tests	−0.067	0.062	**0.757**	−0.058	0.025	0.046	0.69
4. Order diagnostic tests in response to identified concerns e.g., bilirubin in prolonged jaundice in newborns	−0.018	−0.031	**0.750**	0.028	0.063	−0.051	0.69
6. Develop a list of possible causes e.g., for a rash or bruising (differential diagnosis) and revise in accordance with the findings from the individual's history, observation of parent-infant interaction; physical examination and diagnostics	0.227	0.045	**0.433**	−0.103	−0.103	0.008	0.21
9. Review and amend existing prescribed medication under the direction of a medical practitioner e.g., emollients	−0.065	−0.027	−0.042	**−0.934**	0.039	−0.026	0.87
8. Prescribe medication to treat common health problems e.g., for fungal infections or infestations	−0.057	0.035	−0.028	**−0.833**	0.058	0.008	0.77
10. Prescribe or delegate non-pharmacological interventions e.g., social prescribing.	0.127	0.032	0.134	**−0.366**	−0.087	0.013	0.23
22. Address ethical dilemmas by considering the best interest of individuals who are unable to make decisions for themselves	0.149	0.105	0.104	−0.026	**−0.334**	−0.259	**0.07**
29. Use interpersonal skills to support individuals experiencing an intergenerational cycle of poor health and deprivation	0.036	0.007	0.002	−0.035	−0.095	**−0.816**	0.72
30. Engage individuals and families experiencing an intergenerational cycle of poor health and deprivation in education about prevention and health promotion	−0.013	0.059	−0.032	−0.054	−0.109	**−0.756**	0.65
25. Be proactive in response to complex safeguarding concerns	0.159	−0.001	0.070	0.001	0.417	**−0.707**	0.29
32. Collaborate with other health and social care professionals to ensure continuity of care across agencies	0.115	0.051	−0.015	−0.007	0.032	**−0.673**	0.56
24. Respond to safeguarding concerns working within a policy and legal framework	0.206	0.004	0.086	0.011	0.446	**−0.663**	0.22
28. Provide individuals and families with accessible information relevant to their situation and health status during the perinatal and early childhood period	0.199	0.009	−0.025	−0.023	0.033	**−0.613**	0.41
27. Empower individuals and families to identify achievable goals in the perinatal and early childhood period	0.235	0.034	−0.062	−0.031	−0.026	**−0.582**	0.35
31. Promote health and proactively deliver prevention strategies in the community	−0.102	0.128	0.156	−0.021	−0.125	**−0.534**	0.38
Eigenvalues	12.010	3.888	2.186	1.325	1.212	1.067	
Variance (%)	35.323	11.435	6.430	3.896	3.564	3.139	
Cumulative variance (%)	35.323	46.758	53.188	57.084	60.648	63.787	

Note: Bold values indicate the highest factor loading for each item and cross-loadings < 0.20.

[a]Cross-loading difference: the difference in absolute values between the highest loading and the second highest loading (threshold <0.20).

TABLE 3 | Exploratory factor analysis for the 5-factor solution (principal axis factoring, rotation: direct oblimin, KMO = 0.922, Bartlett's test: $\chi^2 = 11164.465$, df = 406, $p < 0.001$).

Items	Factor					Cross-loading difference[a]
	1	2	3	4	5	
25. Be proactive in response to complex safeguarding concerns	**0.845**	−0.121	0.068	−0.068	0.034	0.72
24. Respond to safeguarding concerns working within a policy and legal framework	**0.804**	−0.124	0.061	−0.063	0.081	0.68
29. Use interpersonal skills to support individuals experiencing an intergenerational cycle of poor health and deprivation	**0.787**	0.067	−0.021	0.080	0.026	0.71
30. Engage individuals and families experiencing an intergenerational cycle of poor health and deprivation in education about prevention and health promotion	**0.713**	0.121	−0.002	0.046	−0.004	0.59
32. Collaborate with other health and social care professionals to ensure continuity of care across agencies	**0.709**	0.059	−0.011	0.001	0.064	0.64
28. Provide individuals and families with accessible information relevant to their situation and health status during the perinatal and early childhood period	**0.657**	0.016	−0.001	0.000	0.143	0.51
27. Empower individuals and families to identify achievable goals in the perinatal and early childhood period	**0.616**	0.056	0.006	−0.033	0.178	0.44
31. Promote health and proactively deliver prevention strategies in the community	**0.496**	0.182	−0.008	0.207	−0.086	0.29
40. Lead clinical practice to improve care quality	−0.002	**0.858**	0.026	−0.058	−0.016	0.80
44. Lead service changes by considering sustainable health care (e.g., care which addresses health needs without causing damage to environmental and other resources for future generations and that aligns with UN sustainable development goals).	−0.076	**0.836**	0.025	0.059	−0.033	0.76
41. Co-ordinate the team to ensure quality of care	−0.072	**0.810**	0.043	−0.047	−0.006	0.74
43. Influence health policy based on your expertise of community health needs assessments	0.013	**0.781**	−0.038	0.106	−0.047	0.67
39. Influence and negotiate changes to service delivery to optimise population health outcomes in the perinatal and early childhood period	0.136	**0.720**	−0.053	0.031	−0.030	0.58
42. Manage distributed risk (risk which is not under your direct control and is created by others)	0.027	**0.703**	−0.007	0.031	0.046	0.66
35. Proactively lead the workplace learning culture and professional development of other staff members	0.028	**0.629**	0.037	−0.072	0.144	0.48
37. Supervise and assess other staff members in developing their competencies	0.044	**0.562**	0.087	−0.066	0.072	0.48
9. Review and amend existing prescribed medication under the direction of a medical practitioner e.g., emollients	0.038	−0.009	**0.892**	−0.016	−0.052	0.84
8. Prescribe medication to treat common health problems e.g., for fungal infections or infestations	0.021	0.031	**0.834**	−0.028	−0.058	0.78
10. Prescribe or delegate non-pharmacological interventions e.g., social prescribing.	−0.025	0.069	**0.344**	0.162	0.150	**0.18**
5. Interpret the results of those diagnostic tests	−0.021	0.044	0.082	**0.731**	−0.041	0.65

(Continues)

TABLE 3 | (Continued)

Items	Factor					Cross-loading difference[a]
	1	2	3	4	5	
4. Order diagnostic tests in response to identified concerns e.g., bilirubin in prolonged jaundice in newborns	0.081	−0.057	−0.009	**0.730**	0.003	0.65
6. Develop a list of possible causes e.g., for a rash or bruising (differential diagnosis) and revise in accordance with the findings from the individual's history, observation of parent-infant interaction; physical examination and diagnostics	−0.007	0.072	0.102	**0.433**	0.250	**0.18**
11. Provide expert health visiting practice that is tailored to individuals and their families	0.061	0.027	−0.018	−0.085	**0.807**	0.72
7. Use of professional reasoning to make autonomous decisions	−0.019	0.079	−0.009	0.023	**0.696**	0.62
17. Apply interpersonal skills to work in partnership with individuals and families in the perinatal and early childhood period	0.275	0.017	−0.002	−0.117	**0.620**	0.35
15. Develop a person-centred therapeutic relationship with individuals and their families	0.249	0.023	−0.014	−0.082	**0.609**	0.36
12. Modify practice to manage risk	0.094	0.061	0.014	0.046	**0.599**	0.51
13. Deliver tailored prevention interventions to individuals, families and wider communities in the context of health visiting service delivery	0.208	0.103	−0.024	−0.044	**0.515**	0.31
2. Undertake physical examination and observation to identify health, developmental and behavioural needs	−0.024	−0.048	0.053	0.157	**0.419**	0.26
Eigenvalues	10.233	3.750	2.172	1.293	1.108	
Variance (%)	35.287	12.932	7.488	4.459	3.820	
Cumulative variance (%)	35.287	48.219	55.707	60.166	63.986	

Note: Bold values indicate the highest factor loading for each item and cross-loadings < 0.20.
[a]Cross-loading difference: the difference in absolute values between the highest loading and the second highest loading (threshold < 0.20).

policy and service delivery. Health visitors are a heterogeneous group of staff as they work in teams in often different service configurations. In some teams, health visitors lead a larger team of staff including staff nurses and community nursery nurses. In other settings, two health visitors might work independently managing the population of families either on a geographical or patient surname general practice split. This explains the current study's finding that for the leadership and team co-ordination items, the mean was lower than for direct care items, and the range of responses is wider from 'not at all' through to 'very great extent' in terms of the frequency which respondents carried out that aspect of their role. Stansfield (2017) described how health visitors often conceptualise their leadership role as leading the development of health visiting services as opposed to team management or leadership. While leadership skills are developed as part of health visitor education programmes, there remains a lack of clarity about what health visitors lead (Walker and Jennison 2024). The focus is often on leading services and influencing policy and service delivery by feeding back information about health needs, in particular unmet need, as part of a strategic needs assessment (McInnes and Rich 2015). The Institute of Health Visiting (2025b) has done extensive work to develop system leaders via its fellowship programme (now called the Dame Elizabeth Fradd Leadership Programme) and within local healthcare organisations some health visitors undertake leadership training, but this is often not nuanced to health visiting practice and how health visiting is delivered. The emphasis on services delivery and system leadership is reflected in the items in this factor with only one of the items relating to team co-ordination. Education also featured in factor two, with items related to leadership of a workplace learning culture and supporting the professional development of other staff and supervising and other staff to develop their competencies receiving particularly high mean scores for this factor (with a mean of mean 4.25 and 4.23, respectively). Health visitors have three educational roles which include the development of team members, acting as a practice supervisor for nursing students on placement and finally acting as a practice supervisor for specialist community public health students undertaking a course leading to qualification as a health visitor. While the mean scores show this is a common feature of health visiting advanced practice, the range remains from 'not at all' to 'very great extent' for these items. This reflects pressures on health visiting services with a greater emphasis on the delivery of contractual obligations related to child health surveillance rather than on holistic practice (Clery et al. 2025). The Institute of Health Visiting (2025a) have identified a reduction

TABLE 4 | Final scale: descriptive statistics and internal consistency (Cronbach's alpha and McDonald's omega).

Factors and items	Mean (SD)	Min-max	Skewness	Kurtosis	Item to total correlation	Cronbach's alpha if item deleted	McDonald's omega if item deleted
Factor 1: Working with and for families ($\alpha = 0.880$; $\omega = 0.884$)	4.80 (0.35)	2.75–5.00	−2.42	6.66	—	—	—
25. Be proactive in response to complex safeguarding concerns	4.91 (0.31)	3–5	−3.44	11.99	0.720	0.865	0.870
24. Respond to safeguarding concerns working within a policy and legal framework	4.91 (0.30)	3–5	−3.45	11.92	0.710	0.867	0.871
29. Use interpersonal skills to support individuals experiencing an intergenerational cycle of poor health and deprivation	4.80 (0.46)	3–5	−2.29	4.63	0.806	0.849	0.853
30. Engage individuals and families experiencing an intergenerational cycle of poor health and deprivation in education about prevention and health promotion	4.75 (0.49)	3–5	−1.79	2.38	0.747	0.855	0.858
32. Collaborate with other health and social care professionals to ensure continuity of care across agencies	4.83 (0.42)	2–5	−2.74	9.03	0.741	0.857	0.862
28. Provide individuals and families with accessible information relevant to their situation and health status during the perinatal and early childhood period	4.86 (0.38)	3–5	−2.71	6.97	0.715	0.862	0.867
27. Empower individuals and families to identify achievable goals in the perinatal and early childhood period	4.82 (0.43)	3–5	−2.29	4.63	0.713	0.860	0.865
31. Promote health and proactively deliver prevention strategies in the community	4.51 (0.83)	1–5	−1.75	2.49	0.514	0.916	0.918
Factor 2: Leading, managing and influencing ($\alpha = 0.913$; $\omega = 0.915$)	3.80 (0.89)	1.00–5.00	−0.58	−0.11	—	—	—
40. Lead clinical practice to improve care quality	3.92 (1.14)	1–5	−0.85	−0.03	0.805	0.894	0.896

(Continues)

TABLE 4 | (Continued)

Factors and items	Mean (SD)	Min-max	Skewness	Kurtosis	Item to total correlation	Cronbach's alpha if item deleted	McDonald's omega if item deleted
44. Lead service changes by considering sustainable health care (e.g., care which addresses health needs without causing damage to environmental and other resources for future generations and that aligns with UN sustainable development goals).	3.20 (1.27)	1–5	−0.06	−1.01	0.774	0.896	0.898
41. Co-ordinate the team to ensure quality of care	3.67 (1.20)	1–5	−0.55	−0.59	0.745	0.899	0.902
43. Influence health policy based on your expertise of community health needs assessments	3.46 (1.23)	1–5	−0.28	−0.91	0.743	0.899	0.902
39. Influence and negotiate changes to service delivery to optimise population health outcomes in the perinatal and early childhood period	3.97 (1.11)	1–5	−0.84	−0.17	0.713	0.902	0.904
42. Manage distributed risk (risk which is not under your direct control and is created by others)	3.71 (1.10)	1–5	−0.50	−0.46	0.701	0.903	0.905
35. Proactively lead the workplace learning culture and professional development of other staff members	4.25 (0.95)	1–5	−1.16	0.76	0.653	0.907	0.910
37. Supervise and assess other staff members in developing their competencies	4.23 (0.98)	1–5	−1.17	0.68	0.595	0.911	0.913
Factor 3: Prescribing interventions ($\alpha = 0.750$; $\omega = 0.778$)	2.80 (1.22)	1.00–5.00	0.19	−0.99	—	—	—
9. Review and amend existing prescribed medication under the direction of a medical practitioner e.g., emollients	2.39 (1.45)	1–5	0.53	−1.15	0.696	0.528	[a]
8. Prescribe medication to treat common health problems e.g., for fungal infections or infestations	2.60 (1.54)	1–5	0.32	−1.41	0.644	0.585	[a]
10. Prescribe or delegate non-pharmacological interventions e.g., social prescribing.	3.41 (1.48)	1–5	−0.48	−1.17	0.415	0.841	[a]
Factor 4: Diagnostic reasoning ($\alpha = 0.712$; $\omega = 0.738$)	2.89 (1.03)	1.00–5.00	0.21	−0.77	—	—	—
5. Interpret the results of those diagnostic tests	2.09 (1.22)	1–5	0.87	−0.24	0.618	0.519	[a]

(Continues)

TABLE 4 | (Continued)

Factors and items	Mean (SD)	Min-max	Skewness	Kurtosis	Item to total correlation	Cronbach's alpha if item deleted	McDonald's omega if item deleted
4. Order diagnostic tests in response to identified concerns e.g., bilirubin in prolonged jaundice in newborns	2.71 (1.48)	1–5	0.24	−1.31	0.584	0.562	[a]
6. Develop a list of possible causes e.g., for a rash or bruising (differential diagnosis) and revise in accordance with the findings from the individual's history, observation of parent-infant interaction; physical examination and diagnostics	3.87 (1.15)	1–5	−0.83	−0.05	0.418	0.746	[a]
Factor 5: Professional practice ($\alpha = 0.820$; $\omega = 0.822$)	4.78 (0.36)	2.57–5.00	−2.51	7.67	—	—	—
11. Provide expert health visiting practice that is tailored to individuals and their families	4.89 (0.35)	2–5	−3.50	14.44	0.739	0.782	0.784
7. Use of professional reasoning to make autonomous decisions	4.81 (0.45)	2–5	−2.52	6.49	0.624	0.788	0.790
17. Apply interpersonal skills to work in partnership with individuals and families in the perinatal and early childhood period	4.90 (0.32)	3–5	−3.27	10.62	0.706	0.789	0.790
15. Develop a person-centred therapeutic relationship with individuals and their families	4.85 (0.41)	2–5	−2.89	9.10	0.708	0.779	0.781
12. Modify practice to manage risk	4.79 (0.49)	2–5	−2.46	6.32	0.635	0.784	0.786
13. Deliver tailored prevention interventions to individuals, families and wider communities in the context of health visiting service delivery	4.76 (0.54)	2–5	−2.39	5.99	0.636	0.783	0.784
2. Undertake physical examination and observation to identify health, developmental and behavioural needs	4.46 (0.88)	1–5	−1.68	2.44	0.379	0.880	0.882
Overall scale ($\alpha = 0.890$; $\omega = 0.888$)	4.15 (0.46)	2.30–5.00	−0.75	0.83	—	—	—

Note: Bold values indicate the highest factor loading for each item and cross-loadings < 0.20.
[a]Cannot be estimated because the number of items is <4.

in health visiting numbers and a corresponding increase in caseload sizes which have reduced the amount of time available for education and staff support. At the same time students studying health visiting no longer have dedicated practice teacher support, following a decision by the Nursing and Midwifery Council in 2018 to withdraw the practice teacher standard and move to practice supervisors and academic assessors (Oldman 2022). Colenzo (2021) believes that it is unrealistic to expect a health visitor with a large caseload who has no protected time as an educator to ensure that health visitor students are adequately prepared for their future roles.

Factor three related to the prescribing of interventions and medicines and consisted of three items. Health visitors have been educated as prescribers since 2001 and can prescribe from a limited formulary of medicines designed for community nurses. Muncey (2018) outlined how more than 95% of health visitors are prescribers but that prescribing practice is somewhat limited by the range of medicines health visitors can prescribe and the limited opportunities they have to treat minor illnesses. Many of the medicines which health visitors can prescribe are available via pharmacies as over the counter medicines without a prescription. However, health visitors often prescribe medicines where families are struggling because of low incomes and poverty. Muncey (2018) found good levels of satisfaction from families with health visitor prescribing and this reduced the demand on General Practice appointments. Bishop and Gilory (2015) reported that health visitors often did not use prescribing powers because of logistical issues, lack of access to prescription pads, or because service commissioners had decided not to permit prescribing. The issue of ongoing professional development and maintaining skills was also highlighted as a barrier. Factor three also includes social prescribing, which is defined as connecting people to groups, activities and support which improve their health and wellbeing (National Academy of Social Prescribing 2025). Health visitors engage in social prescribing extensively, including through referring parents to mother and toddler groups and breast-feeding support groups and promoting wellbeing among individuals with mental health problems. Given the underpinning of health visiting being a goal of social justice, it is unsurprising that health visitors make greater use of social prescribing than they do more formal prescribing of Phamaceuticals, indicated by a higher mean score for non-pharmacological prescribing in the current study.

Closely associated with prescribing was factor four which relates to diagnostic reasoning. This factor consisted of three items that related to diagnostic tests and one to differential diagnosis. Differential diagnosis in this context may relate to establishing the cause or likely cause of an injury or common childhood illness such as a rash. However, health visitors also use differential diagnosis in child development assessments and in relation to perinatal mental health. Differential diagnosis was a more common feature of health visiting practice than the ordering and interpretation of diagnostic tests, and it is related to a diagnostic reasoning dimension, that is key for clinical decision-making.

The final factor relates to professional health visiting practice and consists of seven items. Two of these items are about the delivery of tailored interventions to individuals and families as part of health visiting services. A further two relate to communication and the development of a therapeutic relationship with individuals and families. The remaining items involve the assessment and management of risk and clinical decision making. The factor has an average mean of 4.78, illustrating that these items are core elements of day-to-day health visiting practice.

Of the items which did not make the final scale structure, those related to research and ethical decision making are somewhat surprising. Both areas are common features of advanced practice nursing models (Hamric et al. 1996; Health Education England 2017), and while ethical reasoning features in advanced practice role delineation studies (Unsworth et al. 2025), research is often absent. This is commonly associated with limited capacity to undertake research and a lack of confidence issues in being research active (Dean 2023; Fielding et al. 2022). Added to this, the paucity of funding flows and processes for research in community settings (Charles and Wills 2026) create another barrier to research engagement. For health visitors, while ethical issues such as care refusal occur, they occur relatively infrequently, perhaps explaining why these items did not make it into the final scale structure. In this vein, it is important to acknowledge that this study tested the advanced competences as perceived by health visitors in their everyday practice at this point in time in the evolution of the role. While ethical decision making and research are key components of the theoretical models of advanced competences, these factors are not currently represented in the actual practice, but this does not exclude that they will be represented in the future or in different healthcare settings or countries.

6.1 | Strengths and Limitations

The convenience sampling strategy may have introduced a self-selection bias, with individuals more engaged in advanced practice potentially more likely to respond. However, the large sample size and the data cleaning process to ensure multivariate normality and avoid biases, such as floor or ceiling effects, should have limited this possibility and strengthened the methodological rigour of this study. Also, the limited variability of the participants' demographic characteristics and organisational contexts may also have influenced the assessment of some domains of advanced practice. Another limitation pertains to the online format of the survey that could have introduced a digital exclusion bias. Therefore, the survey may have been completed by participants more favourable to digital solutions or with better access to them. Different data collection strategies could better enhance participation from health visitors working in rural areas. The advanced competences may also evolve over time, and the cross-sectional design of the study may not have captured the progression of those competences. Lastly, the self-reported nature of the scale may have introduced a social desirability bias, where the participants may have reported self-perceived higher scores to meet the expectations of the survey or better represent their level of competence. Despite these limitations, this study is the first methodological study presenting a rigorous validation of the core domains of health visitors' advanced competences and, therefore, addressing a core issue in public health and in health and social care.

6.2 | Recommendations for Further Research

Future research should consider different settings and healthcare systems to represent various geographical areas and professional contexts, hence providing a wider understanding of health visitors' advanced competences across the different healthcare and social contexts. Moreover, a longitudinal study, or adopting this scale over time, could better inform policy makers on the evolution of advanced practice competences in this area and support the design of effective interventions to promote those competences. Furthermore, given the borderline fit indices found in the CFA and that it wasn't possible to test the CFA on a different and independent sample, future research should further test the model's fit to confirm the scale's structure. The exploration and test of concurrent and criterion validity would also be recommended to further support the validity of this scale by comparing it to other similar scales or to an established outcome.

6.3 | Implications for Policy and Practice

Within the UK, the nursing and midwifery regulator is planning to introduce regulation of advanced nursing practice from 2027 onwards. The process of regulation is likely to include transitionary arrangements for individuals already practising at an advanced level. Work to delineate the advanced practice elements of staff who work as clinical nurse specialists should assist in developing such transitionary arrangements. Regulators are encouraged to consider the transition of these specialist roles as part of creating advanced practice regulation. In particular, to consider the reported components of advanced practice, as described in this study, when setting standards for approved programmes.

Health visiting in the UK has been subject to continued cuts to services and a move from the holistic support of families towards competing activities which can be counted as part of contracting. This drive towards tasks is an all-too-common approach to managing nursing and driving efficiency, as managers dictate how care should be delivered, by whom and when (Khomami and Rustomfram 2019). With this in mind, service managers and leaders should commission health visiting services based on the practice elements articulated in this study. This includes preventative work with families, work around safeguarding and ensuring that services seek to address health inequalities.

Given the importance of health visiting to tackling health inequalities and breaking the intergenerational cycle of poor health and deprivation, this work clearly details how health visitors as advanced practice nurses can manage complexity and make significant improvements to the lives of families, children and the wider health of the nation if they are enabled and permitted to practice in a holistic way. From a policy perspective early intervention in the first 1000 days of life can prevent longer term health problems, issues around emotional and mental health and set the groundwork for health diet and development during childhood. Policy makers must therefore recognise the important role health visitors play in supporting families during this period through a search for health needs, identifying interventions and social prescribing and providing support, advice and guidance to families.

7 | Conclusion

The development and validation of the Health Visiting Advanced Practice Scale (HVAPS) provides a psychometrically valid and reliable instrument for delineating the areas of advanced practice among UK health visitors. Through a three-phase process which included item generation, content validity assessment and psychometric testing, the scale provides empirical support for positioning health visiting within the broader framework of advanced nursing practice. The final five-factor structure covers domains core to health visiting, including family-centred care, professional leadership, prescribing, diagnostic reasoning and tailored interventions as part of professional practice. These domains reflect the complex and multifaceted nature of contemporary health visiting practice, bridging universal public health provision with targeted interventions for vulnerable populations.

Importantly, HVAPS addresses a longstanding gap in the literature and provides a bespoke tool for evaluating the professional scope of this specialist public health nursing role. The scale can support workforce development, inform educational frameworks and provide insights for policymakers tasked with strengthening child and family health services. Future research should explore longitudinal applications of HVAPS, its utility in comparative international contexts with public health nurses working with families, and its potential to influence recognition and credentialing of health visitors as advanced practitioners.

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Ethics Statement

Ethical approval for this research was granted by the Institutional Review Board at Northumbria University (Reference number: 7020; Date of approval: 14 August 2024).

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** jocn70260-sup-0001-DataS1.docx. **Data S2:** jocn70260-sup-0002-DataS2.docx.