Nurse Education Today 123 (2023) 105743

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/locate/nedt

Research article

Effects of student-led drama on nursing students' attitudes to interprofessional working and nursing advocacy: A pre-test post-test educational intervention study

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ARTICLE INFO

Keywords:
Drama
Nursing students
Advocacy
Empathy
Health and social care integration
Teamwork
Co-production

ABSTRACT

Background: Nursing educators need to equip students to work in interprofessional teams and advocate for patients in increasingly integrated health and social care settings. Drama-based education has been used in nursing to help students understand complex concepts and practices, including communication, empathy, and patient safety. However, few studies have evaluated drama-based education to promote understanding of interprofessional care and advocacy, and none have involved student-led drama where students create dramatic performances to support learning.

Objectives: To examine the effects of student-led drama on student nurses' attitudes to interprofessional working and advocacy.

Design: Pre-test post-test educational intervention study.

Settings: Public university in Scotland.

Participants: 400 undergraduate student nurses enrolled on a 15-week module focussed on health and social care integration and interprofessional working.

Methods: Students completed paper questionnaires at the start ($n = 274$, response rate: 80.1 %) and end ($n = 175$, 63.9 %) of the module. Outcome measures were the validated Attitudes Towards Healthcare Teams Scale (ATHCTS) and Protective Nursing Advocacy Scale (PNAS). Change in mean ATHCTS and PNAS scores were assessed using paired samples *t*-tests, with Cohen's d to estimate effect size.

Results: ATHCTS scores significantly increased from 3.87 to 4.19 ($p < 0.001$, $d = 0.52$). PNAS scores increased from 3.58 to 3.81 ($p < 0.001$, $d = 0.79$), with significant improvements in the 'acting as an advocate' (4.18 to 4.51, $p < 0.001$, $d = 0.81$) and 'environmental and educational influences' subscales (3.79 to 4.13, $p < 0.001$, $d = 0.75$). Statements focussed on promoting holistic, dignified care and enabling health professionals to be responsive to emotional and financial needs of patients, showed greatest change.

Conclusions: Education based on plays created and performed by student nurses led to significant improvements in student nurses' attitudes towards interprofessional working and nursing advocacy. Student-led drama should be embedded in nursing curricula to enable students to understand the realities and complexities of health and social care integration and interprofessional working.

1. Introduction

Integration of health and social care services has been accelerated by governments internationally, largely driven by demographic challenges around an ageing population, pressures on health and social care, and more recently, recovery from the Covid-19 pandemic. Health and social care integration is an attractive policy proposal as it seeks to improve service efficiency, patient safety and person-centred care, and realise financial savings through shorter hospital stays and fewer emergency admissions (Reed et al., 2021). In the UK, for example, *The Public Bodies (Joint Working) Act (2014)* in Scotland created Integration Authorities (IA) that are partnerships between the National Health Service (NHS),

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https://doi.org/10.1016/j.nedt.2023.105743
Received 22 November 2022; Received in revised form 19 January 2023; Accepted 29 January 2023
Available online 2 February 2023

local authorities, and the voluntary and community sector. Each IA is responsible for the delivery of health and social care services within a geographic area and are required to work towards nine national health and wellbeing outcomes that include enabling people to live at home or in a homely setting, ensuring people are safe from harm, respecting dignity, reducing health inequalities, and using resources effectively and efficiently (Scottish Government, 2015).

Health and social care integration depends on effective and efficient interprofessional working between health and social care teams with often different professional backgrounds, cultures and working practices. As the largest professional group in healthcare systems internationally, nurses need to be enabled to work in interprofessional care teams from the outset of their education. Nurse educators therefore need to ensure that students have the knowledge and confidence to work in interprofessional teams and advocate for patients within increasingly integrated health and social care landscapes. In the UK, the Nursing and Midwifery Council (NMC) standards of proficiency for registered nurses notes that: "Increasing integration of health and social care services will require registered nurses to negotiate boundaries and play a proactive role in interdisciplinary teams" (NMC, 2018: p.3). Platform 7 of the standards are focussed on 'Coordinating Care'. To meet this, students are required to understand "principles of partnership, collaboration and interagency working across all sectors", "health legislation and current health and social care policies" (NMC, 2018: p.25), and develop appropriate "approaches to advocacy" (NMC, 2018: p.30). It is important that the concept and practice of interprofessional working is introduced to students gradually in ways that support students' professional identity formation as nurses (Vabo et al., 2022). Similarly, a staged approach to students' engagement with health (and social care) policy has been proposed, focussing first at undergraduate/baccalaureate level on awareness of policy and organisational structures, leading to advocacy for patients and communities (Ellenbecker et al., 2017). Engaging with interprofessional education during undergraduate studies influences future positive attitudes towards interprofessional working (O'Carroll et al., 2016). However, intentions to work interprofessionally have been found to wane over time reinforcing professional boundaries and physician centrality in healthcare teams (O'Carroll et al., 2016). Developing innovative and creative ways of embedding a focus on interprofessional working and advocacy throughout the nursing curriculum is therefore a key priority for nurse educators.

2. Background

Drama-based educational approaches have been used in nursing education to enable students to grapple with complex concepts and practices, including communication, conflict, empathy, and patient safety (Arveklev et al., 2015; Arveklev et al., 2018). Few studies, however, have used drama to develop students understanding of health policy around health and social care integration and confidence with interprofessional working (Balen et al., 2010; Dingwall et al., 2017; Fusco et al., 2020), and none to date have involved student nurses in the creation of performances subsequently used as an educational tool. Summarising the findings of their integrative review, Arveklev et al. (2015) noted that, to date, drama-based educational interventions have not realised their full potential in healthcare education because they have not enabled students to become 'fictive patients' or to step out of their own professional role to play the role of other members of the wider interprofessional healthcare team. Our study addressed this evidence gap by engaging with two student-led dramas that illustrated the importance of effective inter-professional care, inter-agency working and nursing advocacy: *Mad, Bad, Invisible* and *Cracks*. Both dramas were filmed and incorporated into a second-year module in the BSc Nursing Programme focussed on interprofessional and inter-agency working, nursing advocacy, and health and social care integration policy.

2.1. Drama-based intervention

The play *Mad, Bad, Invisible*, was performed publicly by student nurses in 2017 at Serenity Café – a recovery café in Edinburgh staffed by people recovering from addiction and the setting for some of the events in the play. *Mad, Bad, Invisible* tells the story of Anne, a young woman experiencing mental health crisis who fails to receive adequate support from health and care services, ultimately leading to a prison sentence and subsequent recovery only through the penal system. The drama *Cracks*, written by a student nurse, was performed publicly at Edinburgh's Summerhall as part of a public engagement event in 2019. *Cracks* tells the story of Debbie and Bob, whose lives gradually interweave and illustrate the stark consequences of integrated and disintegrated care, resulting in timely and effective support for Bob and the untimely death of Debbie due to delayed discharge and subsequent hospital-acquired infection.

Recordings of both plays were initially shown in full to the entire student cohort of over 300 students, followed by an initial plenary discussion. Subsequently, specific scenes from the dramas were used in weekly tutorial classes of around 50–60 students led by one academic. Each tutorial class was further split into groups of around 10–12 to stimulate small-group and then plenary discussion around the core concepts underpinning the module, including interprofessional working and advocacy. Students were also encouraged to re-watch and reflect on the recorded dramas during independent study and consider learning from them as they prepared their module assignment on the role of health and social care integration in person-centred care.

In this paper we report findings from embedded evaluation of the effects of the use of these recorded student-led dramas on student nurses' knowledge and understanding of health and social care integration, attitudes to interprofessional working, and confidence to work in interprofessional teams. Specifically, the following research questions were addressed:

Does student-led drama improve student nurses'

a) attitudes towards working in interprofessional health care teams?
b) knowledge and understanding of health and social care integration?
c) confidence to work in interprofessional teams?

3. Methods

3.1. Study design and participants

A cross-sectional study with embedded pre-test post-test evaluation of a drama-based educational intervention was conducted in one large urban nursing school in the UK. Nursing students in the second year of a three-year pre-registration programme enrolled on a 15-week module focussed on interprofessional working and health and social care integration were invited to participate in the study via an announcement on the module's virtual learning environment.

3.2. Data collection

A paper questionnaire was issued to students at the start of the first tutorial class of the module in week two and again at the end of the final tutorial in week 12. Of the 544 students enrolled on the module, 342 (62.9 %) were present in class on the day of baseline data collection, of which 274 completed the survey (response rate = 80.1 %). The follow-up survey was completed by 175 students (63.9 %) of whom 49 (28.0 %) had also completed the survey at baseline. Student absence was lower than expected at the final tutorial at which follow-up data collection was completed, likely due to circulating winter illnesses and impending module assessment deadlines. This limited the number of baseline and follow-up surveys that were able to be matched.

3.3. Measures

Measures included were: the Quality of Care/Processes subscale of the Attitudes to Healthcare Teams Scale (ATHCTS) (Heinemann et al., 1999), Protective Nursing Advocacy Scale (PNAS) (Hanks, 2010), questions to assess student confidence, and socio-demographic measures.

3.4. Attitudes towards Healthcare Teams Scale (ATHCTS)

The ATHCTS includes two sub-scales: (1) 'quality of care/processes' (14 items assessing perceptions of the quality of teamwork to deliver care), and (2) 'physician centrality' (6 items assessing physician authority in healthcare teams and their control over patient information) (Heinemann et al., 1999). Only the 'quality of care/processes' sub-scale was used in this study due to the drama-based intervention's focus on improving attitudes to interprofessional working rather than changing attitudes towards physicians. The 'quality of care/processes' sub-scale of the ATHCTS was measured on a five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. Negatively worded items are reverse coded before analysis. Reliability of the sub-scale was acceptable with Cronbach's alpha of 0.83 in Heinemann et al.'s (1999) validation study and 0.72 in this study. The ATHCTS was measured before and after the intervention.

3.5. Protective Nursing Advocacy Scale (PNAS)

The PNAS includes four sub-scales: (1) 'acting as an advocate' (16 items assessing actions nurses' take to advocate for patients), (2) 'work status and advocacy actions' (5 items reflecting possible consequences of nursing advocacy at work); (3) 'environmental and educational influences' (8 items assessing nurses' use of their knowledge and internal environment to advocate for patients), and (4) 'support and barriers to advocacy' (8 items reflecting the external support for advocacy and the work environment') (Hanks, 2010). The PNAS was measured on a five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. Negatively worded items are reverse coded before analysis. Reliability for the sub-scales in Hanks' (2010) validation study was acceptable with Cronbach's alpha of 0.80 for the overall PNAS, and 0.91, 0.93, 0.70 and 0.73 for the sub-scales respectively. Cronbach's alpha in this study was marginally lower at 0.77 for the overall PNAS and 0.81, 0.87, 0.57, and 0.68 for the sub-scales, respectively. The PNAS was measured before and after the intervention.

3.6. Student confidence

Students' confidence to explain inter-agency working, health and social care integration and confidence to work in interprofessional teams was assessed through 3 items developed by the research team, each measured on a 10-point visual scale.

3.7. Socio-demographics

Categorical data on gender, age, ethnicity, level of education and previous caring experience were collected at baseline.

3.8. Data analysis

Data analysis was conducted in four steps. First, descriptive statistics were calculated for socio-demographic questions (gender, ethnicity, age, previous healthcare-related experience) and each statement on the ATHCTS and PNAS scales and reported as n (%) using pre-test survey responses ($n = 274$). Second, scores for each scale and PNAS subscales were reverse coded for negatively worded items and calculated as mean (standard deviation [SD]) using pre-test survey responses ($n = 274$). Third, differences in each scale and subscale by gender, ethnicity, age, and previous healthcare-related experience were examined using independent samples *t*-tests and ANOVA (where appropriate) for pre-test survey responses ($n = 274$). Fourth, percentage point change in agreement with each ATHCTS and PNAS item was calculated for responses that could be matched before and after the educational intervention ($n = 49$) and at a cohort level using pre-test ($n = 274$) and post-test ($n = 175$) data. Finally, change in mean scores for all outcome measures before and after the educational intervention were assessed for students that could be matched before and after the education ($n = 49$) using paired samples *t*-tests with effect sizes calculated using Cohen's d. Data analysis was conducted in IBM SPSS 28 (Armonk, NY). Statistical significance was set at $p = 0.05$.

3.9. Ethical considerations

The study was reviewed and approved by the Research Ethics Committee in the School of Health and Social Care, Edinburgh Napier University (study reference: SHSC19015). Informed consent was obtained at each data collection point. Student responses were anonymous at all stages of data collection and analysis, with before and after responses linked using a unique identifier generated by each respondent.

4. Results

4.1. Sample

Most students were female (90.5 %, $n = 248$), of white ethnicity (88.7 %, $n = 243$), and two-fifths (40.1 %, $n = 111$) were aged 21–30 years old, reflecting the demographic profile of nursing students in the University. Over half had previous healthcare-related caring experience before starting their nursing programme (56.6 %, $n = 155$) (Table 1).

Table 1
Sample characteristics.

Variable	Cross-sectional sample ($n = 274$)		Matched-pair sub-sample ($n = 49$)	
	%	n	%	n
Age				
≤20 years	29.2	80	24.5	12
21–30 years	40.5	111	49.0	24
31–40 years	19.3	53	16.3	8
41–60 years	10.9	30	10.2	5
Gender				
Female	90.5	248	95.9	47
Male	8.7	24	4.1	2
In another way	5.5	2	–	–
Ethnicity(1)				
White	88.7	243	95.9	47
BAME	9.5	26	4.1	2
Prefer not to say	1.8	5	–	–
Highest Educational Level				
Secondary/High School	25.9	71	16.3	8
College	50.4	138	69.4	34
Bachelor's / Undergraduate Degree	20.1	55	12.2	6
Master's / Postgraduate Degree	3.6	10	2.0	1
Previous healthcare-related experience				
Yes	56.6	155	63.3	31
No	43.4	119	36.7	18

Note: (1) Black, Asian and Minority Ethnic.

4.2. Attitudes towards working in health care teams (ATHCTS)

Table 2 shows students' pre-test responses to the ATHCTS scale. Statements with the highest level of agreement before the intervention focussed on the role of interprofessional working in improving the quality of care ('The inter-professional approach improves the quality of care to patients/clients.') (95.3 %), communication between professionals ('Team meetings foster communication among team members from different professions or disciplines.') (90.5 %), and professionals' understanding of the work of the healthcare team ('Having to report observations to a team helps team members better understand the work of other health professionals.') (90.5 %). Statements with the lowest levels of agreement related to associations between interprofessional working and job satisfaction ('Working in an inter-professional environment keeps most health professionals enthusiastic and interested in their jobs.') (38.3 %), the role of interprofessional working in improving holistic care ('Patients/clients receiving inter-professional care are more likely than others to be treated as whole persons.') (50.0 %), and increasing responsiveness to patients' emotional and financial needs ('Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.') (51.1 %) (Table 2).

Overall, the mean ATHCTS score was 3.88 (SD =0.394). Mean ATHCTS scores were significantly higher in students of Black, Asian and Minority Ethnicity (BAME) compared to students of White ethnicity (BAME = 4.03, White = 3.86, $t_{(267)} = -2.13$, $p = 0.034$, d = −0.44). There were no statistically significant differences by gender, age or previous healthcare experience.

4.3. Attitudes to protective nursing advocacy (PNAS)

Table 3 shows students' pre-test responses to the PNAS scale. Statements with the highest level of agreement before the intervention related to advocacy as keeping the patients interests at the centre ('As the nurse, I keep my patient's best interest as the main focus of nursing advocacy.') (96.7 %), advocacy protecting vulnerable patients from harm ('I am acting as a patient advocate when I am protecting vulnerable patients from harm.') (95.2 %), and advocacy as preserving patients' rights ('I am advocating for my patient when I protect my patient's rights in the health care environment.') (94.9 %). Statements with the lowest level of agreement related to potential negative career consequences of engaging in advocacy, including punishment ('I may be punished for my actions by my employer when I inform my patients of their own rights.') (7.7 %), and placing their employment at risk ('When nurses inform and educate patients about patients' rights in the clinical setting, the nurses may place their employment at risk.') (8.4 %), and lacking dedication to advocate for patients ('I lack the dedication to the nursing profession to act as a patient advocate.') (11.0 %) (Table 3).

Overall, the mean PNAS score was 3.58 (SD = 0.32). There were no statistically significant differences in overall PNAS score by gender, age, ethnicity or previous healthcare-related experience. However, differences were observed for subscales of the PNAS. Mean PNAS scores for the 'acting as an advocate' subscale were significantly higher for BAME students compared to students of White ethnicity (BAME = 4.36 (SD = 0.42), White = 4.12 (SD = 0.42), $t_{(260)} = -2.81$, $p = 0.005$, d = −0.59). Mean PNAS scores for the 'work status' subscale were significantly higher among students of White ethnicity compared to BAME students (White = 2.54, BAME = 2.01, $t_{(266)} = 3.22$, $p = 0.001$, d = 0.66) and among students with no previous healthcare-related experience compared to those with this experience (No = 2.67 (SD = 0.68), Yes = 2.36 (SD = 0.89), $t_{(271)} = 3.28$, p = 0.001, d = 0.39). Gender differences were observed for the 'environmental and educational influences' and 'support and barriers to advocacy' subscales, with higher mean PNAS scores in men compared to women for each subscale (environmental and educational influences: Male = 4.00 (SD = 0.52), Female = 3.75 (SD = 0.44), $t_{(264)} = -2.56$, $p = 0.011$, d = −0.55; support and barriers to

Table 2
Pre-test Attitudes Towards Healthcare Teams Scale (ATHCTS).

		Pre-test (n = 274)											
		Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree		Total	
Item	Quality of Care/Processes Sub-scale Item	%	n	%	n	%	n	%	n	%	n	%	n
1	The inter-professional approach improves the quality of care to patients/clients.	47.8	131	47.4	130	4.7	13	0.0	0	0.0	0	100	274
2	The inter-professional approach permits health professionals to meet the needs of family caregivers as well as patients.	33.9	93	55.1	151	9.9	27	0.7	2	0.4	1	100	274
3	Having to report observations to a team helps team members better understand the work of other health professionals.	45.3	124	45.3	124	9.1	25	0.4	1	0.0	0	100	274
4	The inter-professional approach makes the delivery of care more efficient.	39.4	108	47.1	129	10.2	28	3.3	9	0.0	0	100	274
5	Hospital patients who receive inter-professional team care are better prepared for discharge than other patients.	31.8	87	38.0	104	26.6	73	3.3	9	0.4	1	100	274
6	Team meetings foster communication among team members from different professions or disciplines.	37.6	103	52.9	145	9.1	25	0.4	1	0.0	0	100	274
7	The give and take among team members helps them make better patient/client care decisions.	21.5	59	54.7	150	22.6	62	1.1	3	0.0	0	100	274
8	Patients/clients receiving inter-professional care are more likely than others to be treated as whole persons.	17.2	47	32.8	90	34.3	94	13.5	37	2.2	6	100	274
9	Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.	15.0	41	36.1	99	36.1	99	10.9	30	1.8	5	100	274
10	Working in an inter-professional environment keeps most health professionals enthusiastic and interested in their jobs.	7.3	20	31.0	85	50.7	139	10.6	29	0.4	1	100	274
11	Developing a patient/client care plan with other team members avoids errors in delivering care.	23.4	64	47.8	131	18.6	51	8.4	23	1.8	5	100	274
12	Working in an inter-professional manner unnecessarily complicates things most of the time.(1)	4.4	12	8.0	22	29.2	80	50.4	138	8.0	22	100	274
13	In most instances, the time required for inter-professional consultations could be better spent in other ways.(1)	1.8	5	4.4	12	30.3	83	54.7	150	8.8	24	100	274
14	Developing an inter-professional patient/client care plan is excessively time-consuming.(1)	1.1	3	12.8	35	30.7	84	44.5	122	10.9	30	100	274

Note: (1) Negatively worded statement.

Table 3
Pre-test Protective Nursing Advocacy Scale (PNAS).

		Pre-test (n = 274)											
		Strongly agree		Moderately agree		Neither agree nor disagree		Moderately disagree		Strongly disagree		Total	
Item	Subscale / Item	%	n	%	n	%	n	%	n	%	n	%	n
	Acting as an advocate (16 items)												
1	Patients need nurses to act on the patients' behalf.	17.3	47	34.7	94	27.3	74	17.0	46	3.7	10	100	271
2	Nurses are legally required to act as patient advocates when patients are perceived to be in danger.	47.8	130	37.5	102	12.1	33	1.8	5	0.7	2	100	272
3	As the nurse, I keep my patient's best interest as the main focus of nursing advocacy.	74.8	205	21.9	60	2.9	8	0.4	1	0.0	0	100	274
4	Nurses who understand the benefits of patient advocacy are better patient advocates.	43.4	119	41.2	113	15.0	41	0.4	1	0.0	0	100	274
5	I am acting on my patient's behalf when I am acting as my patient's advocate.	39.4	108	39.4	108	18.2	50	2.6	7	0.4	1	100	274
6	I speak out on my patient's behalf when I am acting as my patient's advocate.	37.2	102	39.8	109	18.2	50	4.7	13	0.0	0	100	274
7	I am acting as my patient's voice when I am advocating for my patient.	31.9	87	33.3	91	24.5	67	8.1	22	2.2	6	100	273
8	I am acting as the patient's representative when I am acting as the patient's advocate.	33.8	92	43.4	118	16.5	45	5.1	14	1.1	3	100	272
9	I am advocating for my patient when I protect my patient's rights in the health care environment.	50.9	139	44.0	120	4.4	12	0.7	2	0.0	0	100	273
10	I am acting as a patient advocate when I am protecting vulnerable patients from harm.	54.9	150	40.3	110	3.7	10	1.1	3	0.0	0	100	273
12	Nurses that act on a patient's behalf are preserving the patient's dignity.	23.1	63	35.5	97	33.3	91	6.6	18	1.5	4	100	273
25	I am ethically obligated to speak out for my patients when they are threatened by harm.	56.9	156	32.8	90	8.0	22	2.2	6	0.0	0	100	274
26	Nurses that provide information to patients about patient care are acting as patient advocates.	17.5	48	43.1	118	28.8	79	8.4	23	2.2	6	100	274
27	Patients have varying degrees of ability to advocate for themselves.	41.0	112	47.6	130	9.2	25	1.5	4	0.7	2	100	273
28	Vulnerable patients need my protection in harmful situations.	47.1	129	42.0	115	10.6	29	0.4	1	0.0	0	100	274
37	Nurses are acting as advocates when nurses protect the right of patients to make their own decisions.	32.5	89	39.8	109	19.0	52	6.6	18	2.2	6	100	274
	Work status and advocacy actions (5 items)												
30	I may suffer risks to my employment when acting as a patient advocate.	4.0	11	16.4	45	44.2	121	23.4	64	12.0	33	100	274
31	Nurses that speak out on behalf of patients may face retribution from employers.	2.9	8	16.4	45	43.8	120	26.3	72	10.6	29	100	274
32	I may be punished for my actions by my employer when I inform my patients of their own rights.	1.1	3	6.6	18	27.1	74	32.6	89	32.6	89	100	273
33	Nurses that speak out on behalf of vulnerable patients may be labelled as disruptive by employers.	2.9	8	22.6	62	31.8	87	23.0	63	19.7	54	100	274
34	When nurses inform and educate patients about patients' rights in the clinical setting, the nurses may place their employment at risk.	1.8	5	6.6	18	30.7	84	29.9	82	31.0	85	100	274
	Environment and educational influences (8 items)												
11	I provide patient advocacy to protect my patients only when necessary in the health care environment.	24.5	67	32.6	89	21.6	59	16.5	45	4.8	13	100	273
13	I scrutinize circumstances that cause me to act as a patient advocate.	8.1	22	26.9	73	51.3	139	9.2	25	4.4	12	100	271
14	I utilise organisational channels to act as a patient advocate.	13.2	36	42.1	115	42.9	117	1.8	5	0.0	0	100	273
15	I would benefit from the advice of ethics committees to be a more effective patient advocate.	29.6	81	48.9	134	19.7	54	1.5	4	0.4	1	100	274
19	I am able to be a better patient advocate because I have more self-confidence.	19.3	53	38.0	104	31.0	85	10.9	30	0.7	2	100	274
20	Nurses that are committed to providing good patient care are better patient advocates.	36.9	101	36.5	100	22.3	61	3.6	10	0.7	2	100	274
21	Increased dedication to nursing increases the nurse's ability to act as a patient advocate.	24.2	66	41.0	112	26.0	71	8.4	23	0.4	1	100	273
22	Increased nursing education enhances the nurse's effectiveness in patient advocacy.	40.3	110	41.4	113	12.8	35	5.1	14	0.4	1	100	273
	Support and barriers to advocacy (8 items)												
16	Lack of time inhibits my ability to act as a patient advocate.	16.4	45	38.7	106	29.2	80	10.9	30	4.7	13	100	274
17	Nurses practice patient advocacy more when they are working in a tolerant work environment.	22.3	61	34.3	94	36.9	101	4.7	13	1.8	5	100	274
18	Nurses who are supported by physicians (doctors) are better patient advocates.	23.7	65	30.7	84	33.9	93	9.9	27	1.8	5	100	274
23	I doubt my own abilities to provide advocacy for my patients.	2.2	6	16.8	46	39.8	109	29.6	81	11.7	32	100	274
40	I am less effective at speaking out for my patients when I am tired.	5.5	15	23.4	64	28.5	78	25.2	69	17.5	48	100	274
41	I am not an effective advocate because I am suffering burnout.	5.5	15	21.7	59	26.1	71	28.3	77	18.4	50	100	272
42	Because I don't like working as a nurse, I am less willing to act as a patient advocate.	5.5	15	17.2	47	16.8	46	22.3	61	38.3	105	100	274
43	I lack the dedication to the nursing profession to act as a patient advocate.	3.7	10	7.3	20	17.6	48	23.4	64	48.0	131	100	273

advocacy: Male = 3.25 (SD = 0.64213), Female = 2.86 (SD = 0.59), $t_{(267)} = -2.98$, $p = 0.003$, d = −0.64). There were no other statistically significant differences by gender, age, ethnicity or previous healthcare-related experience for any of the four PNAS subscales.

4.4. Effects of student-led drama

Change in agreement with ATHCTS statements is shown in Table 4 and Fig. 1. The greatest increase in agreement with ATHCTS items was observed for statements that focussed on interprofessional working improving holistic care ('Patients/clients receiving inter-professional care are more likely than others to be treated as whole persons.' 59.2 % to 81.6 %, +22.4 percentage points (pp)), keeping professionals engaged in their role ('Working in an inter-professional environment keeps most health professionals enthusiastic and interested in their jobs.' 30.6 % to 65.3 %, +34.7 pp) and enabling them to respond to the emotional and financial needs of their patients ('Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.' 53.1 % to 85.7 %, +32.7 pp) (Table 4, Fig. 1).

Table 4
Pre-test post-test change in ATHCTS.

		Strongly Agree/ Agree		
		Pre-test (n = 49)	Post-test (n = 49)	Change
Item	Quality of Care/Processes Sub-scale Item	%	%	pp
1	The inter-professional approach improves the quality of care to patients/clients.	89.8	95.9	6.1
2	The inter-professional approach permits health professionals to meet the needs of family caregivers as well as patients.	75.5	91.8	16.3
3	Having to report observations to a team helps team members better understand the work of other health professionals.	93.9	98.0	4.1
4	The inter-professional approach makes the delivery of care more efficient.	81.6	89.8	8.2
5	Hospital patients who receive inter-professional team care are better prepared for discharge than other patients.	79.6	89.8	10.2
6	Team meetings foster communication among team members from different professions or disciplines.	91.8	89.8	−2.0
7	The give and take among team members helps them make better patient/client care decisions.	77.6	95.9	18.4
8	Patients/clients receiving inter-professional care are more likely than others to be treated as whole persons.	59.2	81.6	22.4
9	Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.	53.1	85.7	32.7
10	Working in an inter-professional environment keeps most health professionals enthusiastic and interested in their jobs.	30.6	65.3	34.7
11	Developing a patient/client care plan with other team members avoids errors in delivering care.	61.2	73.5	12.2
12	Working in an inter-professional manner unnecessarily complicates things most of the time.(1)	12.2	14.3	2.0
13	In most instances, the time required for inter-professional consultations could be better spent in other ways.(1)	6.1	6.1	0.0
14	Developing an inter-professional patient/client care plan is excessively time-consuming.(1)	12.2	16.3	4.1

Note: (1) Negatively worded statement.

Change in agreement with PNAS statements is shown in Table 5 and Fig. 2. The greatest change in agreement with PNAS score was identified for items focussed on using organisational channels of advocacy ('I utilise organisational channels to act as a patient advocate.' 51.0 % to 83.7 %, +32.7 pp), advocacy as preserving patient dignity ('Nurses that act on a patient's behalf are preserving the patient's dignity.' 61.2 % to 87.8 %, 26.5 pp), the link between self-confidence and effective advocacy ('I am able to be a better patient advocate because I have more self-confidence.' 51.0 % to 77.6 %, +26.5 pp) (Table 5, Fig. 2).

Table 6 shows mean ATHCTS, PNAS and confidence scores before and after the intervention. Overall ATCHTS and PNAS scores significantly increased after the intervention, with significant increases also observed in two subscales of the PNAS: 'acting as an advocate' (including items related to the actions nurses take to advocate for patients) and 'environment and educational influences' (including items related to nurses' knowledge, confidence, values and beliefs). There was no statistically significant increase in the remaining two subscales: 'work status and advocacy actions' (including items related to the consequences of advocacy in the work setting) and 'support and barriers to advocacy' (including items related to external organisational and environmental support for advocacy). Students' confidence to explain inter-agency working, health and social care integration and to work in interprofessional teams significantly increased after the intervention (Table 6).

5. Discussion

Student-led drama embedded in an undergraduate nursing programme resulted in significant positive improvements in student nurses' attitudes to interprofessional working and nursing advocacy. No previous studies have been conducted using student-led drama as an educational intervention in the context of interprofessional working (Arveklev et al., 2015). However, our study confirms evidence from studies of healthcare students' engagement with live and recorded performance that has shown that drama enables students to challenge professional perspectives (Dingwall et al., 2017), vicariously experience the challenges of living with complex illness (Fusco et al., 2020; Balen et al., 2010), and develop allyship (Jarus et al., 2022) as a step towards advocacy. The greatest positive attitudinal shifts in our study were observed for statements focussed on the role of interprofessional working in promoting holistic and dignified care, and enabling health professionals to be responsive to the emotional and financial needs of patients. In line with previous studies, this suggests that drama may drive attitudinal improvement due to its applied, authentic and emotionally-charged portrayal of experience.

5.1. Authenticity and emotion in applied drama-based approaches

Authentic representations of illness experience have been found to promote beneficial change in attitudes towards people living with illness in previous educational interventions. Dingwall et al.'s (2017) study in Dundee, Scotland used an interprofessional approach to bring together nursing and social work students to engage in a forum theatre production *Sliding Doors*. Taking its concept from the homonymous romantic comedy film, the lives of a woman with dementia and her husband were performed with periodic pauses in the production to enable student discussion and alternative futures to be played out. The intervention positively impacted students' attitudes towards older people, person-centred care and interprofessional collaborations (Dingwall et al., 2017). Similarly, Fusco et al. (2020) worked with a local theatre company in Buffalo, New York to create a film titled *Meet Fred Santiago* that told the story of a Hispanic man living with multiple complex chronic health conditions. Over three years, the film was viewed by 1921 students and 250 faculty across the fields of nursing, medicine, dentistry, pharmacy, social work, public health, physiotherapy, occupational therapy, dietetics, law, management and athletic training as part of an

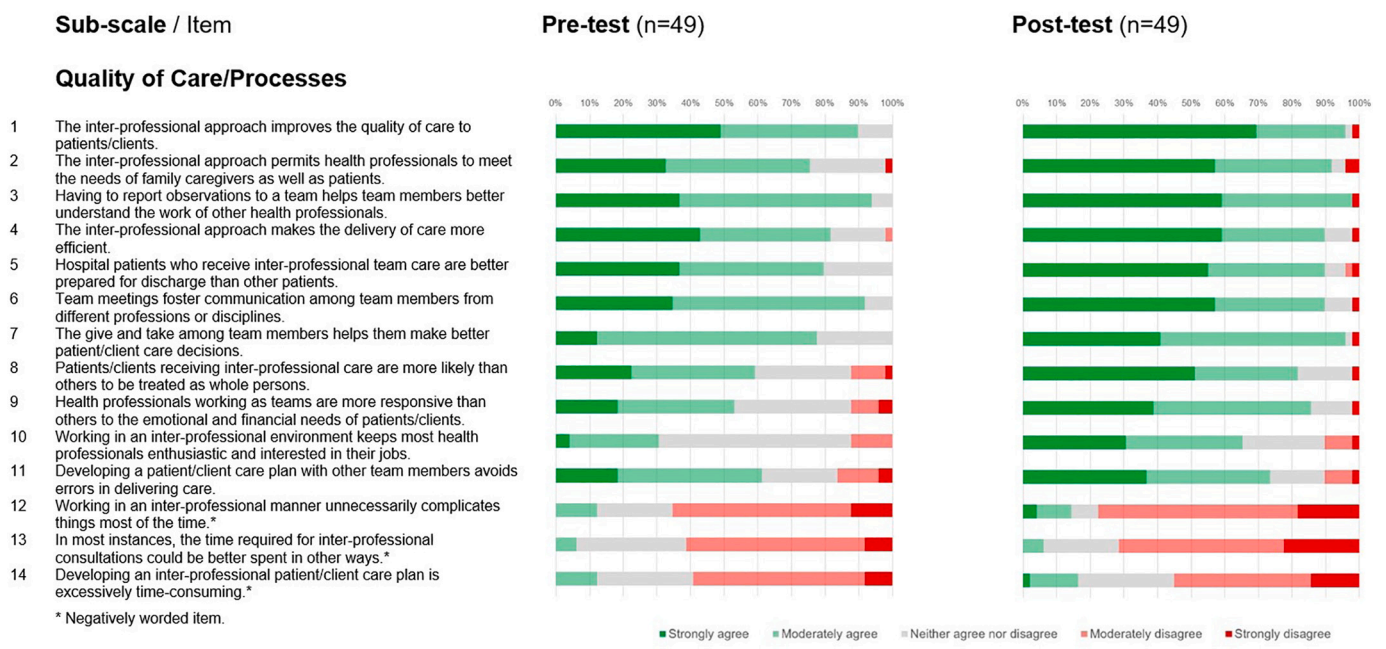

Fig. 1. Pre-test post-test change in ATHCTS.

interprofessional forum. Evaluation showed that >85 % of students each year agreed that the findings presented a 'realistic view of the challenges faced by people with multiple health conditions' and had 'helped them appreciate the breadth of issues confronting people with chronic problems'. Fusco et al. (2020) concluded that presentation of a holistic view of Fred and his family and healthcare professionals was central to its impact.

Emotional engagement in performance has also been shown to be a key ingredient in the success of educational interventions encouraging interprofessional working. For example, Balen et al. (2010) developed an interdisciplinary workshop day for social work, occupational therapy and nursing students with a focus on mental health. The day included three activities, including: watching a version of a British Broadcasting Corporation (BBC) drama *Stuart: A Life Backwards* that told the story of a man experiencing homelessness and alcoholism; forum theatre portraying family, friend and employer reactions to the experience of a woman living with depression; and a service user monologue from a service user living with mania. Balen et al. (2010) concluded that "emotional engagement with teaching is an important means of developing skills of critical thinking and of empathy" (pg. .425). Similarly, Jarus et al.'s (2022) recent evaluation of a research-based theatre play *Alone in the Ring*, embodying the experiences of living with disability, found that engagement with the play led to positive shifts in students' attitudes towards allyship of people with disabilities and support for inclusion and equity principles. Importantly, like Balen et al. (2010), Jarus et al. (2022), attribute attitudinal shifts to students' emotional engagement with the experience of watching performance, echoing Shams and Seitz's (2008) contention that multi-sensory training protocols can better approximate natural settings and are more effective for learning. Our findings suggest that drama-based pedagogy enables students to emotionally engage with relatable scenarios, allowing a deeper understanding and connection with complex concepts that can be examined from several perspectives and contexts. In Lundén et al.'s (2017) study of radiographers who participated in a teamwork focussed forum theatre intervention, the importance of self-reflection, developing awareness and empathy were key themes in their findings. In our study, students were exposed to the complexities of (dis)integrated care depicted in the plays though perspectives of patient, carer, and multiple professionals, with learning applied to themes of social inclusion, justice and advocacy.

However, Wray et al. (2008) found that after engagement in a problem-based learning module teaching social inclusion a minority of nursing students retained stereotypical attitudes after the intervention. In our study a similarly small minority of students continued to agree that working interprofessionally "unnecessarily complicates" care, was "excessively time-consuming" and that time "could be better spent in other ways". This suggests that further improvements in attitudes towards interprofessional working may only be realised through students' direct experience of potential benefits in practice settings, or, as Wray et al. (2008) concluded, by using pedagogical methods that explore and challenge such views and attitudes across a programme of education. Further, no statistically significant changes were seen in our study for the 'work status and advocacy actions' and 'support and barriers to advocacy' subscales of the PNAS. Although no change in these scales was expected as these largely focus on extrinsic factors associated with the work setting and organisational environment that are not readily modifiable through educational intervention, this nevertheless raises important questions for future research around how educational intervention effects student nurses practice in clinical settings. Specifically, this identifies a need for studies with longer follow-up periods, particularly after students have experienced a subsequent clinical placement.

5.2. *Towards a mediated metaxis through student-led drama*

Students in our study were able to experience an authentic dramatisation of living with illness, seeking and receiving help, and navigating (dis)integrated health and social care services. Student nurses played the part of both other healthcare professionals in interprofessional teams and patients. Arveklev et al. (2015) argued that enabling students to play the role of 'fictive patients' and different healthcare professionals, facilitates 'metaxis' where students simultaneously occupy two worlds and "reflect on and learn from their real experiences of fictional scenarios" (pg.16). Holding space for metaxis, we suggest, requires educators to not only enable students to engage with authentic and emotive drama experiences, but to be active participants in their creation. Moreover, arriving at authentic representation requires patient and public involvement and interprofessional working in the creative process. In our study, student nurses, nursing academics and patient and public representatives worked collaboratively to write, edit, rehearse, perform, direct, produce, and debate *Mad, Bad, Invisible* and *Cracks*.

Table 5
Pre-test post-test change in PNAS.

Item	Subscale / Item	Strongly Agree/Agree Pre-test (n = 49) %	Strongly Agree/Agree Post-test (n = 49) %	Change pp
	Acting as an advocate (16 items)			
1	Patients need nurses to act on the patients' behalf.	57.1	77.6	20.4
2	Nurses are legally required to act as patient advocates when patients are perceived to be in danger.	81.3	89.8	8.5
3	As the nurse, I keep my patient's best interest as the main focus of nursing advocacy.	95.9	100.0	4.1
4	Nurses who understand the benefits of patient advocacy are better patient advocates.	75.5	91.8	16.3
5	I am acting on my patient's behalf when I am acting as my patient's advocate.	77.6	91.8	14.3
6	I speak out on my patient's behalf when I am acting as my patient's advocate.	75.5	93.9	18.4
7	I am acting as my patient's voice when I am advocating for my patient.	67.3	81.6	14.3
8	I am acting as the patient's representative when I am acting as the patient's advocate.	81.6	89.8	8.2
9	I am advocating for my patient when I protect my patient's rights in the health care environment.	91.8	95.9	4.1
10	I am acting as a patient advocate when I am protecting vulnerable patients from harm.	93.9	98.0	4.1
12	Nurses that act on a patient's behalf are preserving the patient's dignity.	61.2	87.8	26.5
25	I am ethically obligated to speak out for my patients when they are threatened by harm.	95.9	93.9	−2.0
26	Nurses that provide information to patients about patient care are acting as patient advocates.	59.2	83.7	24.5
27	Patients have varying degrees of ability to advocate for themselves.	91.8	91.8	0.0
28	Vulnerable patients need my protection in harmful situations.	91.8	95.9	4.1
37	Nurses are acting as advocates when nurses protect the right of patients to make their own decisions.	75.5	73.5	−2.0
	Work status and advocacy actions (5 items)			
30	I may suffer risks to my employment when acting as a patient advocate.	26.5	16.3	−10.2
31	Nurses that speak out on behalf of patients may face retribution from employers.	24.5	14.3	−10.2
32	I may be punished for my actions by my employer when I inform my patients of their own rights.	4.1	14.3	10.2
33	Nurses that speak out on behalf of vulnerable patients may be labelled as disruptive by employers.	22.4	28.6	6.1
34	When nurses inform and educate patients about patients' rights in the clinical setting, the nurses may place their employment at risk.	4.1	6.1	2.0
	Environment and educational influences (8 items)			
11	I provide patient advocacy to protect my patients only when necessary in the health care environment.	61.2	61.2	0.0
13	I scrutinize circumstances that cause me to act as a patient advocate.	42.9	53.1	10.2
14	I utilise organisational channels to act as a patient advocate.	51.0	83.7	32.7
15	I would benefit from the advice of ethics committees to be a more effective patient advocate.	79.6	85.7	6.1
19	I am able to be a better patient advocate because I have more self-confidence.	51.0	77.6	26.5
20	Nurses that are committed to providing good patient care are better patient advocates.	67.3	81.6	14.3
21	Increased dedication to nursing increases the nurse's ability to act as a patient advocate.	69.4	81.6	12.2
22	Increased nursing education enhances the nurse's effectiveness in patient advocacy.	81.6	91.8	10.2
	Support and barriers to advocacy (8 items)			
16	Lack of time inhibits my ability to act as a patient advocate.	49.0	38.8	−10.2
17	Nurses practice patient advocacy more when they are working in a tolerant work environment.	69.4	73.5	4.1
18	Nurses who are supported by physicians (doctors) are better patient advocates.	71.4	71.4	0.0
23	I doubt my own abilities to provide advocacy for my patients.	22.4	16.3	−6.1
40	I am less effective at speaking out for my patients when I am tired.	24.5	22.4	−2.0
41	I am not an effective advocate because I am suffering burnout.	30.6	32.7	2.0
42	Because I don't like working as a nurse, I am less willing to act as a patient advocate.	20.4	20.4	0.0
43	I lack the dedication to the nursing profession to act as a patient advocate.	8.2	12.2	4.1

Lundén et al. (2017) and Van Bewer et al. (2021) observed that such co-productive Forum Theatre techniques based on healthcare professionals and students' experiences improved self-reflection, awareness and empathy, and strengthened team relationships among health care professionals. Ultimately, student actors and academics became participants in the educational intervention that they had co-created through sharing their personal experiences with fellow students during classroom discussion during the module.

We contend that student-led drama may challenge and change student attitudes towards interprofessional education and nursing advocacy by enabling students to experience what could be termed 'mediated metaxis'. Rather than experiencing first-hand the experience of stepping into different professional roles or patient experiences, second-hand viewing of other students doing so could spark a similar creative tension that challenges personal attitudes and professional perspectives. Because students occupy the space in-between being a student and becoming the professional that other students are portraying, the student audience simultaneously puts themselves into the shoes of 'students-as-students' and 'students-as-professionals' or 'students-as-patients'. Further research is required to assess the mechanisms through which student-led drama effects student attitudes, and to explore the impact that participation in the performance has on student players. Despite the need for further investigation, our study nevertheless demonstrates that student-led drama has positive impacts on attitudes towards interprofessional working and nursing advocacy. We therefore support and renew previous calls for educators to embrace and embed

Fig. 2. Pre-test post-test change in PNAS.

student-led drama in their interprofessional pedagogy.

5.3. Strengths and limitations

This is the first study internationally to evaluate the effect of student-created drama on student nurses' attitudes towards interprofessional

Table 6
Pre-test post-test change in outcome measures.

Scale	Pre-test (n = 49)		Post-test (n = 49)				
	Mean	(SD)	Mean	(SD)	*t*	Sig.	Cohen's d
ATHCTS (Quality of Care/Processes Sub-scale)	**3.87**	**(0.41)**	**4.19**	**(0.60)**	**3.64**	**<0.001**	**0.519**
PNAS	**3.58**	**(0.32)**	**3.81**	**(0.37)**	**5.49**	**<0.001**	**0.793**
I. Acting as an advocate	**4.18**	**(0.45)**	**4.51**	**(0.42)**	**5.61**	**<0.001**	**0.810**
II. Work status and advocacy actions	2.42	(0.87)	2.44	(0.93)	0.21	0.838	0.029
III. Environment and educational influences	**3.79**	**(0.46)**	**4.13**	**(0.48)**	**5.21**	**<0.001**	**0.745**
IV. Support and barriers to advocacy	2.87	(0.61)	2.92	(0.73)	0.56	0.579	0.080
Confidence to explain inter-agency working	**5.63**	**(2.12)**	**7.63**	**(1.65)**	**7.72**	**<0.001**	**1.102**
Confidence to explain health and social care integration	**5.59**	**(2.25)**	**7.45**	**(1.53)**	**6.53**	**<0.001**	**0.933**
Confidence to work in interprofessional teams	**6.51**	**(1.88)**	**8.08**	**(1.63)**	**6.49**	**<0.001**	**0.927**

Note: **Bold** text indicates statistically significant change in pre-test post-test score.

working, nursing advocacy and confidence to work in interprofessional care teams. However, our research has three key limitations. First, this study was conducted in a single university with only one cohort of student nurses and without a comparison group of other healthcare students. Future research should assess and compare the impact of education based on these student-led dramas across higher education institutions, years of study, and different student groups, to determine whether the effects identified are replicated in different contexts. In particular, heeding O'Carroll et al.'s (2016) call for research on the impacts of drama on students at advanced levels of study, the impacts of these plays on learning at post-registration level through continuing professional development should be assessed. Second, only 17.9 % of students completing baseline measures could be matched to post-intervention data, although analysis at a cohort level confirmed the findings observed in the matched pair sample. Increasing the number of participants for which data can be matched should be a priority for future studies. Third, although student-led dramas were developed with patient and public involvement and engagement, and by healthcare professionals with experience of working in interprofessional teams, only registered nurses were involved in the creation of the films. Future research exploring the impact of student-led drama on interprofessional working would benefit from involvement of an interprofessional team in their creation and evaluation.

6. Conclusion

Education based on plays developed and performed by student nurses had positive effects on student nurses' attitudes towards the importance and value of working in interprofessional teams, confidence to work interprofessionally, and advocacy for patients. Educators of nurses and other healthcare professionals should seize opportunities to involve students in the creation of drama-based educational experiences and resources. Embedding student-led drama in healthcare education can enable students to grapple with the realities and complexities of interprofessional working in increasingly integrated health and social care settings.

Funding statement

Mad, Bad, Invisible was performed with financial support from the Economic and Social Research Council (ESRC) as part of the Festival of Social Science in 2017 (Award: SI9063728). Development and performance of *Cracks* was supported by an Edinburgh Napier University Teaching Fellow Grant in 2019.

Declaration of competing interest

The authors declare no conflict of interest.

Acknowledgements

We are grateful to the student nurses, members of the public, and nurse educators who gave freely of their time and abundant talent to perform in *Mad, Bad, Invisible* and *Cracks*. The *Mad, Bad, Invisible* cast was Jennifer Dawson, Charity Gibb, Trisha Jeram, Jasmine Lauchlan, Cynthia Pendergast, and Jennifer Shairp. *Cracks* was performed by Bill Black, Maxine Sharp, Rosie Hastings, Nicola Jamieson, Scott Elder, Linda Veitch, Siobhan Bourke, Richard Kyle, Cynthia Pendergast, Silvia Kovacicova, Bruce Harper-McDonald, Catherine Mahoney, Fiona Bastow, and was written and directed by Trisha Jeram. Our thanks also go to students studying the BA(Hons) in Film in the School of Arts and Creative Industries, Edinburgh Napier University, for their energy and skill in filming *Cracks* for educational use. Gratitude is also expressed to all the student nurses in the School of Health and Social Care, Edinburgh Napier University who took time to participate in the research. We also thank colleagues at the 8th International Nurse Education Conference in Sitges, Spain in October 2022 for their helpful comments on an oral presentation of this paper, and our two anonymous peer reviewers for their constructive critique on an earlier draft.

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Fiona Bastow: Conceptualization; Funding acquisition; Methodology; Investigation; Project administration; Writing – original draft, review & editing.

Bruce Harper-McDonald: Conceptualization; Funding acquisition; Methodology; Investigation; Project administration; Writing - original draft, review & editing.

Trisha Jeram: Conceptualization; Resources; Writing - review & editing.

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