Gender, experience, type of hospital, and culture are associated with Pain Knowledge and Attitudes among registered nurses: A regional survey.

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Purpose of the Survey

- This study examined the knowledge and attitudes of RN's regarding pain management in a specific geographic location.
  - Aim: identify specific characteristics associated with K & A regarding pain

Background & Significance

- Nurses are confronted with the challenge of caring for patients in pain across all practice settings.
- Pain management knowledge and attitudes of health care professionals remains an issue despite a 30 year history of research.
- Knowledge deficits and inaccurate beliefs regarding pain management remain obstacles to optimal care.

Attributes of Knowledge and Attitudes

- Attitude: "a relatively enduring organization of beliefs around an object or situation predisposing one to respond in a preferential manner" (Rokeach, 1970*)*
- *Components of beliefs: cognitive (knowledge), affective (arousal of affect on object of the belief), behavioral (belief leads to action)*
- Reasoned action: "actions are driven by intentions resulting from an attitude towards a behavior and the subjective norm (environmental pressures)" (Larrick, 1993)
- Pain management educational interventions improve pain management K&A but not pain outcomes (Goldberg & Morrison, 2007)

Literature Review

- 30 year body of literature on nursing K&A regarding pain
- Studies K&A in acute care, pediatrics, oncology, home care/hospice, nursing homes, students/faculty, opioids, interventions, culture.
- International nurse K&A studies: Australia, Canada, China, Finland, Italy, Japan, Spain, Tiawan, Turkey, United Kingdom,

Research Question

1. What are the differences in pain knowledge and attitude scores over the past 10 years.
2. What characteristics make a difference among acute care nurses in Pain Management Knowledge and Attitudes.
3. What are the differences in Pain Management Knowledge and Attitudes in nurses practicing in India and the United States
4. What are the barriers to effective pain management

Method

- Descriptive Exploratory Design
- Members of an ASPMN chapter conducted a survey of RN's (N=775)
- 12 regional U.S. hospitals and India (N=55)

Instrument

- "Pain Knowledge and Attitudes of Health Care Providers Survey" (Lebovitz, A. et al.,1997, *Clinical Journal of Pain)*
  - 17 discrete items, 5 point Likert scale; 1=strongly disagree/concordant, 5=strongly agree/discordant
  - Measured knowledge and beliefs about addiction, assessment, scheduling, use of analgesics, and pediatric pain.
  - Concordant responses calculated
  - T-tests and ANOVA were used to examine the differences between select sociodemographic variables and scores on the survey. Sheffe' post-hoc analysis used to determine significant groups differences.
  - Theta coefficient = .755

Sample Questions

- A patient should experience discomfort prior to giving the next dose of pain meds
- Estimation of pain by an MD or RN is as valid a measure of pain as patient self report
- Children cry all the time, therefore, diversional activities are indicated rather than actual pain medications
- Increasing analgesic requirements are signs that the patient is becoming addicted to the narcotic

U.S. Demographics N=775

- **Female: 94%**
- **Age: 21-70 (mean 43, SD 10.4)**
- Teaching Hospital = 47%
- Years of practice: 1-44 (mean 17.3, SD 11.48)
  - 0-5 years: 20.5%
  - 6-10 years: 15.4%
  - 11-15 years: 11.5%
  - 16-20 years: 13.8%
  - >20 years: 35.9%
- **Area of practice**
  - **med/surg: 32.6%**
  - **Crit care: 26.7%**
  - **Peds: 7.6%**
  - **Ob/gyn: 12.5**
  - **Other: 17.5%**
- **Nursing degree**
  - **LPN: 3.7%**
  - **RN/Diploma: 17.2%**
  - **RN/AD: 33.0%**
  - **RN/BS: 45.0%**
- **Ethnicity**
  - **White: 71.9%**
  - **African American: 8.3%**
  - **Hispanic: 3.2%**
  - **Asian: 9.8%**
  - **Other: 3.2%**
- **Country of Origin**
  - **U.S.: 77.2%**
  - **Caribbean: 6.1%**
  - **Asia: 9.5%**
  - **Europe: 3.7%**
  - **Other: 3.5%**

Aggregate Responses

1=more concordant; 5=discordant, Blue=clinically significant (Δ 0.5), >reversed question

Item	Content	ASPMN (2007) N=775	Lebovitz (1997) N=354
4	**Discomfort before next dose**	**1.98**	**2.5**
6	**Administration narcotics intramuscular for CA**	**1.89**	**2.6**
7	**Increasing amounts indicates dependent**	**2.12**	**2.7**
>8	**"prn" narcotics develops clock watching**	**2.58**	**2.3**
11	**25% around the clock addicted**	**2.52**	**3.3**
14	**Increasing analgesics patient addicted**	**2.34**	**2.9**
15	**Pick up cues from children**	**3.08**	**3.7**
17	**Children cry all the time**	**2.01**	**2.5**

Gender : 1=more concordant; 5=discordant

Item	Content	Male	female
>1	Giving Narcotics on a regular schedule is preferred over "prn" schedule for continuous pain	2.58	2.29
>9	The most accurate judge of the intensity of the patient's pain is the patient	1.98	1.60
>10	Distraction, for example, by the use of music or relaxation, can decreases the perception of pain	2.27	1.99
>12	Lack of pain expressed does not mean lack of pain	2.31	1.82

red= significant, green = approaching significance

Years Experience: 1=more concordant; 5=discordant

Item	Content	0-5	6-10	11-15	16-20	>20
>1	Giving narcotics on regular schedule preferred over "prn" for continuous pain	*2.57	2.37	2.36	2.30	*2.08
3	Patient/ family member reports that a narcotic is causing euphoria, a lower dose should be given	*3.23	2.98	*2.75	*2.79	*2.81
>5	Patients with chronic pain often need higher dosage of pain meds that those with acute pain	2.44	*2.49	*2.17	*2.17	2.20
6	Preferred route of administration narcotic pain relievers to patients with cancer is IM	*2.20	1.92	*1.72	1.90	*1.75
11	25% around of patients receiving narcotics around the clock become addicted	*2.61	*2.66	2.51	2.53	*2.38
14	Increasing analgesics requirements are signs that the patient becoming addicted	2.37	*2.55	*2.25	2.36	*2.24
17	Children cry all the time, therefore, diversional activities are indicated rather than actual pain medications.	*2.16	2.08	1.98	1.93	*1.88

Type of Hospital: 1=more concordant; 5=discordant

Item	Content	Community	Teaching
>1	Giving Narcotics on a regular schedule is preferred over "prn" schedule for continuous pain	2.21	2.41
4	A patient should experience discomfort prior to giving the next dose of pain meds.	2.06	1.89
>9	The most accurate judge of the intensity of the patient's pain is the patient	1.74	1.52
>12	Lack of pain expressed does not mean lack of pain	1.95	1.79
16	Since narcotics can cause respiratory depression, they should not be used in peds	2.20	2.07

Culture: 1=more concordant; 5=discordant

Item	Content	US	Caribbean	Asia	Europe
>1	**Narcotics regular schedule**	**2.20**	***2.74**	***2.70**	**2.66**
2	**Estimation of pain**	**2.00**	**2.09**	***2.86**	**2.54**
3	**Narcotics causing euphoria**	**2.81**	**3.04**	***3.42**	**3.21**
4	**Discomfort before dose**	**1.84**	***2.28**	***2.61**	**2.24**
>5	**Chronic pain higher dosage**	**2.20**	***2.89**	**2.48**	**2.31**
6	**Administration narcotics intramuscular**	**1.77**	***2.36**	***2.33**	**2.03**
7	**Increasing amounts dependent**	**2.01**	**2.30**	***2.73**	**2.14**
11	**25% around the clock addicted**	**2.39**	***2.91**	***3.18**	**2.64**
>12	**Pain expression - pain**	**1.80**	**1.85**	***2.29**	**1.97**
>13	**Appropriate request – "prn" meds**	**2.39**	**2.74**	***2.73**	**2.61**
14	**Increasing analgesics patient addicted**	**2.24**	***2.43**	***2.95**	**2.52**
15	**Pick up cues from children**	**2.91**	***3.79**	***3.78**	**3.24**
16	**Narcotics respiratory depression peds**	**2.02**	***2.41**	***2.70**	**2.28**
17	**Children cry all the time**	**1.85**	***2.32**	***2.73**	***2.59**

Mean Scores Teaching Hospitals: India vs. U.S.

Item	Content	India N=55	#4 N=104	#6 N=33	#9 N=41	#12 N=95
2	**Estimation of pain**	**3.05**	**2.00**			**1.95**
3	**Narcotics causing euphoria**	**3.33**				**2.46**
6	**Administration narcotics intramuscular**	**2.42**				**1.45**
11	**25% around the clock addicted**	**3.73**	**2.87**	**2.61**	**2.61**	**2.11**
>12	**Pain expression - pain**	**2.60**	**1.78**			**1.71**
14	**Increasing analgesics patient addicted**	**3.16**				**1.95**
16	**Narcotics respiratory depression peds**	**2.83**			**2.00**	**1.73**
17	**Children cry all the time**	**3.65**	**2.23**	**2.06**	**1.98**	**1.81**

Barriers

300
250
200
150
100
50
0
Lack of education
Attitudes
Assessment of pt
Fear of Addiction/Dependency
Time/Staffing
Cultural/religious/language barriers
Undermedicating/Inadequate meds
Communication
Hospital system/equipment/ordering meds
Poor follow up
Chronic Pain issues
Family Interference
Cost/Insurance/Difficult for patients to get meds
Paperwork/Legal Issues
Intubated patients/OR/Anesthesia issues

Results

- Significant **gender differences** were found on assessment items of pain intensity and pain expression, where females were more concordant with accurate assessment than males.
- **Years of practice** were significant, where greater than10 years of practice yielded more concordant responses.
- **Teaching hospitals** were significantly more concordant with correct responses than community hospitals items regarding assessment, scheduling, and pediatrics.
- Respondents who identified the USA as their **country of origin** had significantly higher concordant responses compared to Caribbean, and Asian countries.
- Barriers
- Cultural differences between nurses in teaching hospitals in India and the United States exist.

Implications

- Outcomes of this study support findings of previous studies.
- Implications for hospitals include pain management education with implementation strategies that will sustain practice changes of specific pain management protocols.
- Attitudes and beliefs about pain are embedded in culture

Limitations

- Limited validation of instrument
- Limited demographics on cultural characteristics (specific country within region, length of time within US)

Future Directions

- Nurses from the Long Island ASPMN chapter plan to develop a systemic approached intervention to disseminate pain management information.