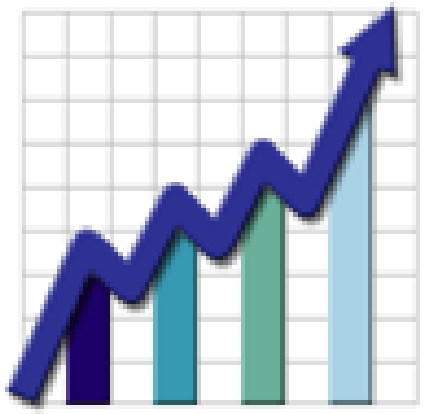


Poster Presentations

On Moodle

Power point Templates:

Template 1: 3 Column, 40" x 36"

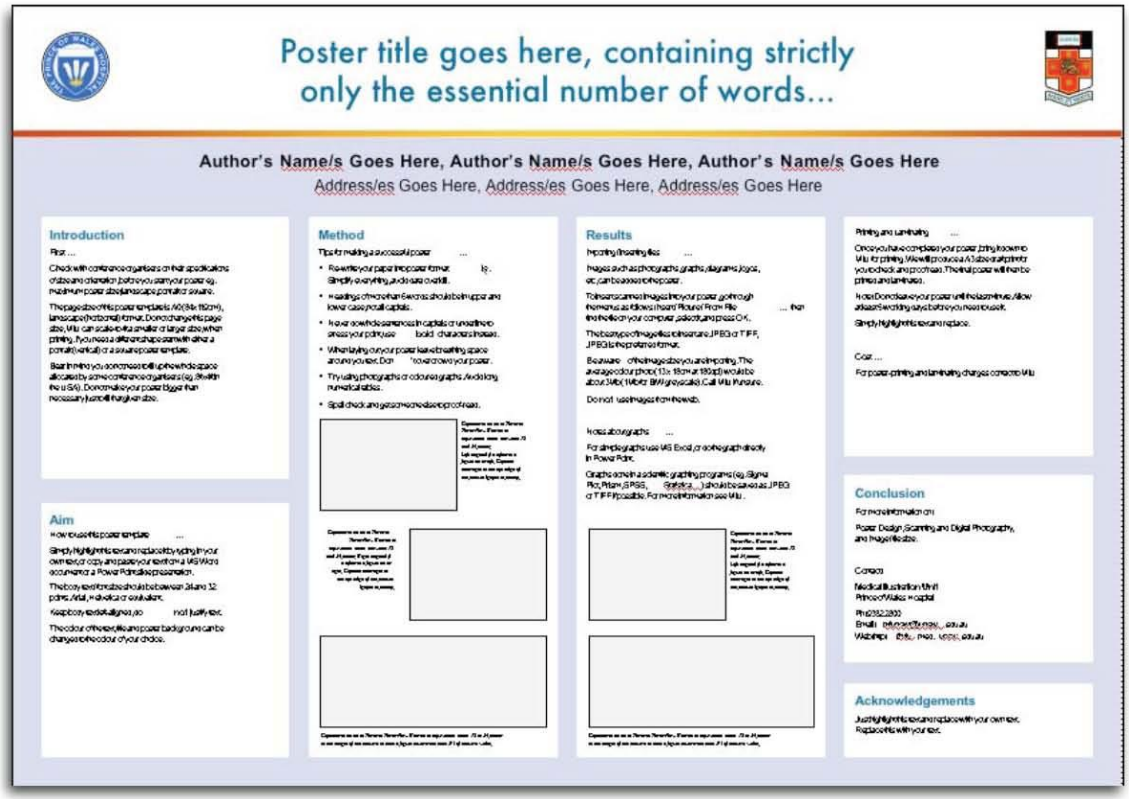
Template 2: 3 Column, 40" x 36"

Template 3: 3 Column, 40" x 36"

Poster design programs…

- Power point – easy, sometimes poor resolution
- Input graphs, text, easy to design, edit and move objects around

Illustrated abstract



Poster Outline

- Title and Author
- Introduction or Background **(Not critical for QAC380)**
- Research questions or hypotheses
- Methods (Sample, Measures and Analyses)
- Results
- Discussion (findings in context – research and limitations)
- Conclusions or Implications
- References **(if you have any)**

Title …

The Association between Psychiatric Disorders and Nicotine Dependence

Do Psychiatric Disorders Moderate the Relationship Between Cigarette Exposure and Nicotine Dependence?

Research Questions/Hypotheses

- Which psychiatric disorders are independently associated with nicotine dependence after adjusting for comorbidity?
- Do psychiatric disorders moderate the association between smoking quantity and nicotine dependence?

Methods

Sample

- The sample was drawn from the first wave of the National Epidemiologic Study of Alcohol and Related Conditions (NESARC), a nationally representative sample of non-institutionalized adults in the US.
- Young adults (age 18 to 25) who reported daily smoking in the past year (n=1320).

Methods

If you data managed, talk about final construct!!

Measures

- Lifetime psychiatric disorders were assessed using the NIAAA, Alcohol Use Disorder and Associated Disabilities Interview Schedule – DSM-IV (AUDADIS-IV) (Grant et al., 2003, Grant et al., 1995).
- The following disorders were examined: major depression, dysthymia, generalized anxiety disorder, panic disorder with or without agoraphobia, social phobia, specific phobia, alcohol dependence, other drug dependence (i.e. amphetamine, opioid, sedative, tranquilizer, cocaine, inhalant, hallucinogen, cannabis, or heroin), and antisocial personality disorder (ASPD).
- The tobacco module contains detailed questions on tobacco use and symptom criteria for DSM-IV nicotine dependence. Current smoking was evaluated through quantity ("On the days that you smoked in the last year, about how many cigarettes did you usually smoke?").

Methods

Analyses

- Chi Square analyses were conducted to examine the bivariate association between each psychiatric disorder and nicotine dependence.
- Logistic regression models were then estimated to test the association between individual psychiatric disorders and nicotine dependence, with control for comorbid psychiatric disorders, current smoking quantity, other tobacco use in the past year (i.e. cigars, snuff, pipe or chewing tobacco), age, ethnicity and gender.
- Next, two-way interactions between psychiatric disorders and current smoking quantity were included in the models to evaluate whether the relationship between nicotine dependence and current smoking was similar for individuals with and without psychiatric disorders.

Results…

- Descriptives sparingly (univariate)
- Focus on multivariate and bivariate (these are your findings).
- Figures
  - Avoid loads of text
  - Share findings in a visual and penetrable way

Results (univariate)…

- 61% (SE 1.54) of daily, young adult smokers met criteria for DSM-IV nicotine dependence in the past year.
- 55% met criteria for one or more psychiatric disorder.
- The most common disorder among daily smokers was alcohol dependence (45% SE 1.9)

Results (bivariate)…

- When examining the association between lifetime major depression (majordeplife - categorical) and past year nicotine dependence (tab12mdx - categorical), a Chi Square analysis revealed that among daily, young adults smokers (my sample), those with past year nicotine dependence were more likely to have experienced major depression in their lifetime (36.2%) compared to those without past year nicotine dependence (12.7%), (X^2 =88.60, 1 df, p=0001).

DO NOT INCLUDE TEXT IN RED

Reporting results….

- When examining the association between current number of cigarettes smoked (usquan - continuous) and past year nicotine dependence (tab12mdx - categorical), an Analysis of Variance (ANOVA) revealed that among daily, young adult smokers (my sample), those with nicotine dependence reported smoking significantly more cigarettes per day (Mean=14.6, s.d. $\pm$9.15) compared to those without nicotine dependence (Mean=11.4, s.d. $\pm$7.43), F(1, 1313)=44.68, p=0001.

DO NOT INCLUDE TEXT IN RED

Reporting results….

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TEXT IN BLUE WOULD BE INCLUDED ON THE POSTER

Reporting multivariate results…

- After adjusting for potential confounding factors, major depression (Beta=1.34, p=.0001) was significantly and positively associated with number of nicotine dependence symptoms.
- After adjusting for potential confounding factors, major depression (O.R. 4.0, CI 2.94-5.37) was significantly and positively associated with the likelihood of meeting criteria for nicotine dependence.

Discussion…

- Individuals with major depression, specific phobia and ASPD were more likely to have nicotine dependence than those without these disorders. This was consistent across levels of smoking.
- In contrast, alcohol dependence moderated the association between smoking quantity and nicotine dependence. Individuals with alcohol dependence were more likely to have nicotine dependence at low levels of daily smoking, but not at the highest levels when compared to individuals without alcohol dependence.
- These findings confirm the association between specific psychiatric disorders and nicotine dependence and extend this work by showing higher rates of nicotine dependence at relatively low levels of smoking for those with depression, specific phobia, ASPD and alcohol dependence.
- Notably, the present findings are based on cross-sectional data and do not reflect the smoking levels at which nicotine dependence emerges. Third variables not examined that may account for these associations cannot be ruled out.

Conclusions or Implications…

- Further research is needed to determine whether sensitivity to nicotine dependence is based on physical and/or psychological differences related to psychiatric disorders.

OR

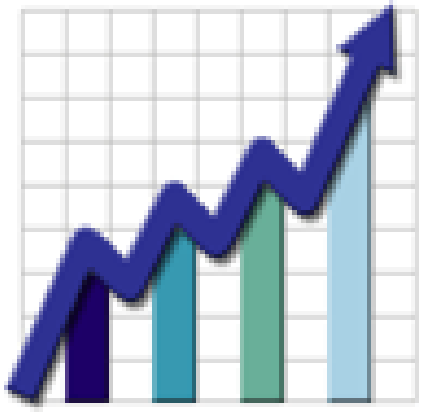
- Young adults with major depression, alcohol dependence, specific phobia or ASPD may be an appropriate group for smoking intervention that more directly targets emerging nicotine dependence symptoms at low levels of smoking.

Limitations

- Absolutely critical
- Clients need to understand the limits on their data so they don't over-interpret/misinterpret

For example:

- The sample size was too small to adequately test some hypotheses. Low statistical power could make a true association appear nonsignificant.
- Replication is critical in order to gain more confidence in the results found in this study.
- There are other possible ways to define perceptions. This research only tested one possible definition. Different definitions could produce different results.
- It is possible that participants may have interpreted a question differently from what was intended.



The Poster Layout/Design

1. What font to use

Type size should be **28 points** or larger:

18 point

20 point

24 point

28 point

36 point

1. What font to use

DO NOT USE ALL CAPITAL LETTERS
BECAUSE IT'S REALLY HARD TO READ!

2. Color

Dark letters against a light background work.

2. Color

Light letters against a dark background also work

2. Color

Avoid red-green combinations because a large fraction of the human population is red-green colorblind.

Lots of people can't read this –
and even if they could, it makes your eyes hurt.

2. Color

Other color combinations can be equally bad:

Other color combinations can be equally bad!

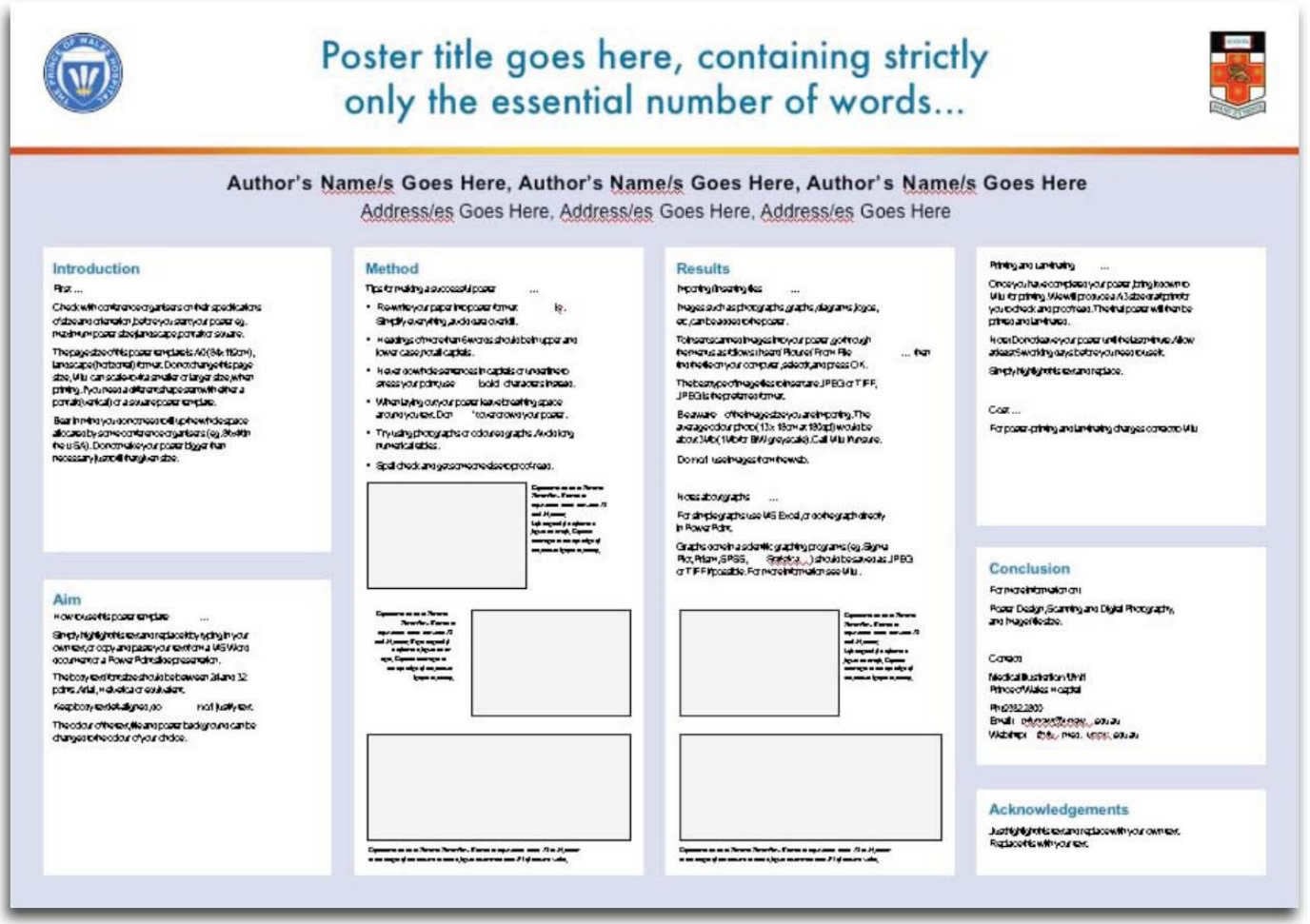
I See A Ghost

- More contrast on monitor than poster
- Colors to avoid with white are:
  - Light Green
  - Light Blue
  - Pale Yellow

Usually can't read this…

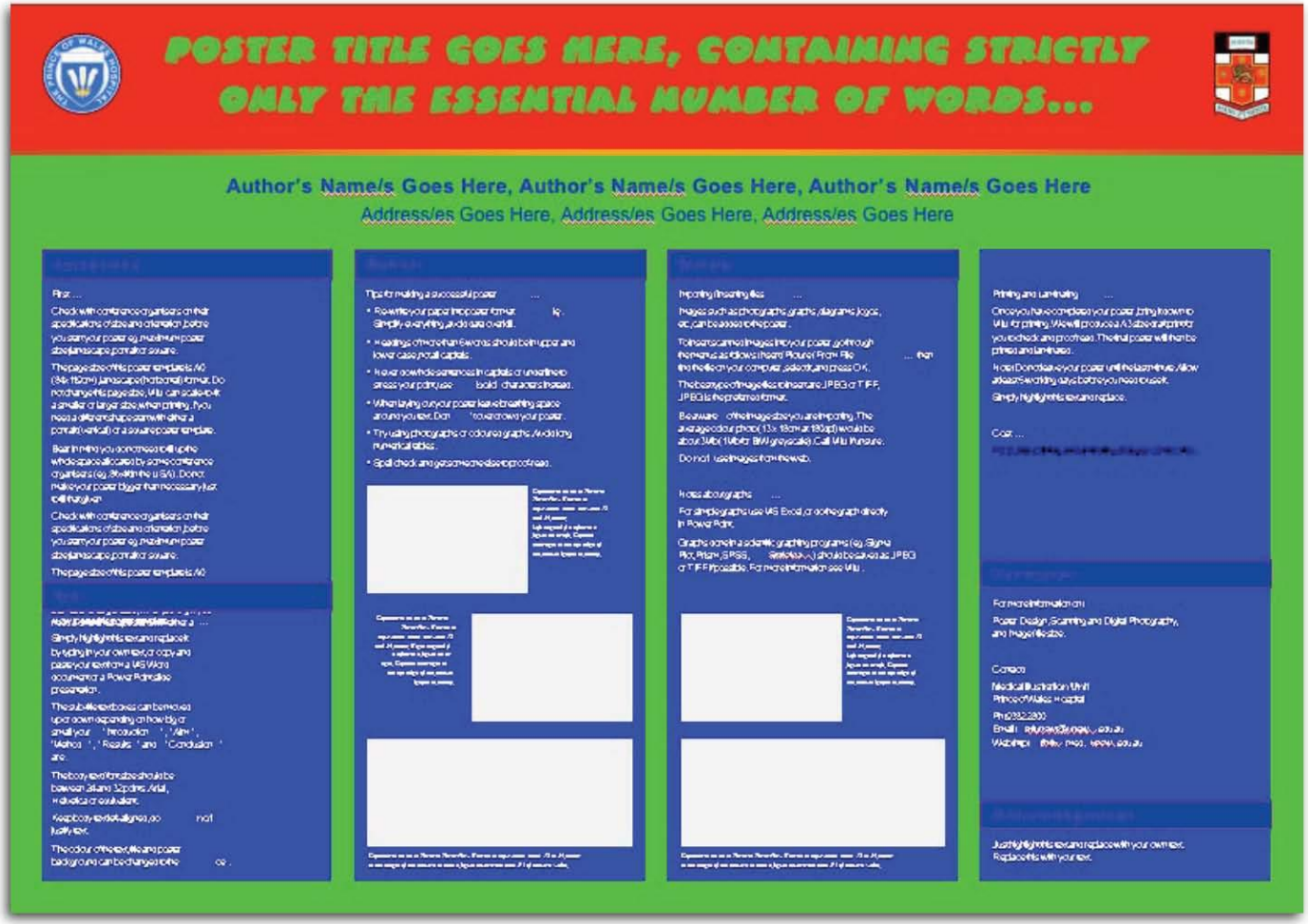
- Your poster should have good contrast

2-3 colors, no more!



Whoa! Where’s my sunglasses?

This attracts attention but wears out the eye



Blue on Red appears blurry to the human eye.

Yellow on white is hard to read

Red on Blue appears blurry to the human eye.

3. Layout

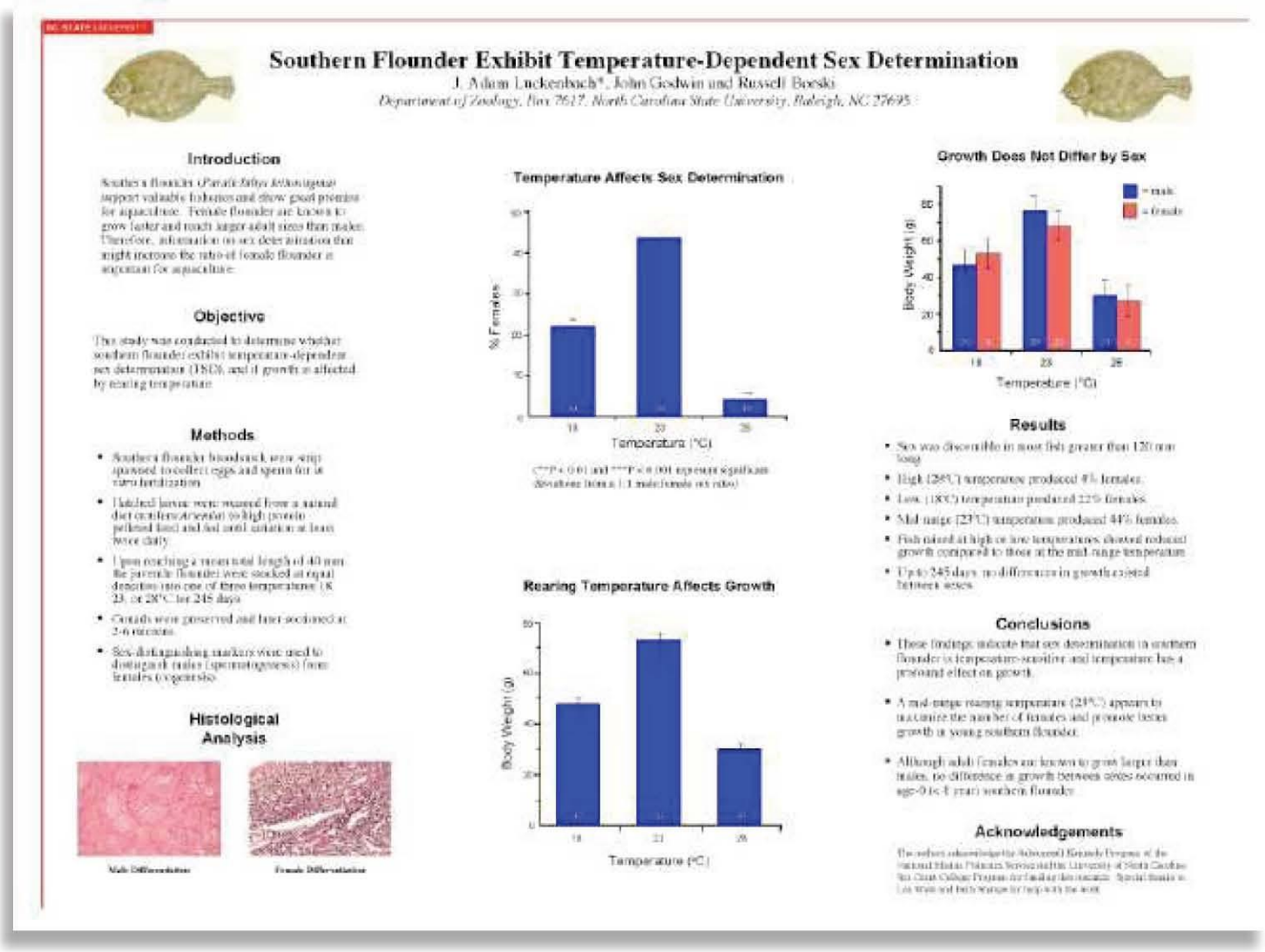
Keep the layout and style as consistent as possible

Every section should have a heading.

Sentences are generally preferred.

Font type the same throughout

Excellent…



Southern Flounder Exhibit Temperature-Dependent Sex Determination

J. Adam Luckenbach*, John Godwin and Russell Borski
Department of Zoology, Box 7617, North Carolina State University, Raleigh, NC 27695

Introduction

Objective

Methods

- Southern flounder broodstock were strip spawned to collect eggs and sperm for in vitro fertilization.
- Hatched larvae were reared from a natural diet (rotifers/*Artemia*) to high protein pelleted feed and fed until satiation at least twice daily.
- Upon reaching a mean total length of 40 mm, the juvenile flounder were stocked at equal densities into one of three temperatures (18, 23, or 28°C) for 245 days.
- Gonads were preserved and later sectioned at 2-6 microns.
- Sex-distinguishing markers were used to distinguish males (spermatogenesis) from females (oogenesis).

Histological Analysis

Male Differentiation

Female Differentiation

Temperature Affects Sex Determination

Rearing Temperature Affects Growth

Growth Does Not Differ by Sex

Results

- Sex was discernible in most fish greater than 120 mm long.
- High (28°C) temperature produced 4% females.
- Low (18°C) temperature produced 22% females.
- Mid-range (23°C) temperature produced 44% females.
- Fish raised at high or low temperatures showed reduced growth compared to those at the mid-range temperature.
- Up to 245 days, no differences in growth existed between sexes.

Conclusions

- These findings indicate that sex determination in southern flounder is temperature-sensitive and temperature has a profound effect on growth.
- A mid-range rearing temperature (23°C) appears to maximize the number of females and promote faster growth in young southern flounder.
- Although adult females are known to grow larger than males, no difference in growth between sexes occurred in age-0 (< 1 year) southern flounder.

Acknowledgements

NC STATE UNIVERSITY

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Southern flounder (*Paralichthys lethostigma*) support valuable fisheries and show great promise for aquaculture. Female flounder are known to grow faster and reach larger adult sizes than males. Therefore, information on sex determination that might increase the ratio of female flounder is important for aquaculture.

Objective

This study was conducted to determine whether southern flounder exhibit temperature-dependent sex determination (TSD), and if growth is affected by rearing temperature.

Methods

- Southern flounder broodstock were strip spawned to collect eggs and sperm for *in vitro* fertilization.
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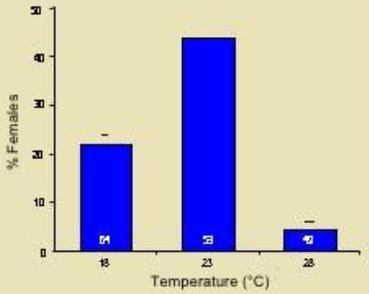
Histological Analysis

Male Testis

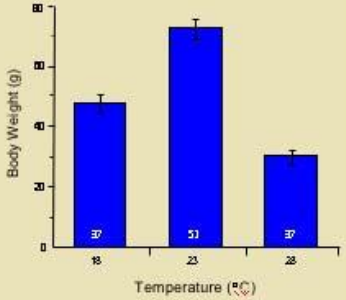
Female Ovary

Temperature Affects Sex Determination

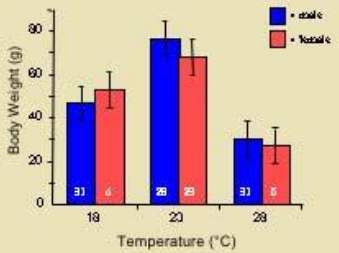


(** P < 0.01 and *** P < 0.001 represent significant deviations from a 1:1 male:female sex ratio)

Rearing Temperature Affects Growth



Growth Does Not Differ by Sex



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Acknowledgements

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NC STATE UNIVERSITY

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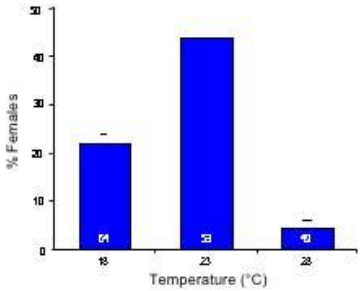

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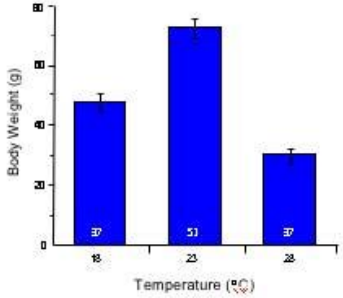
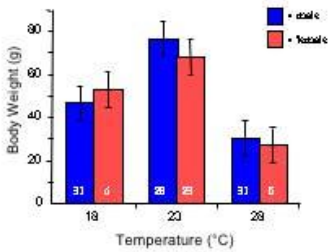


Growth Does Not Differ by Sex



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No busy backgrounds…

NC STATE UNIVERSITY

Snook Growth in Habitats with Differing Abiotic Variability

Alesia Read, North Carolina State University, anread@unity.ncsu.edu

PROPOSED OBJECTIVE

To create a useful tool for assessing potential stocking habitats based on degree of variability in water quality.

- Snook are a popular game fish found in the estuarine creeks of Florida
- Snook population has been on the decline due to overfishing and habitat degradation
- Numerous stock enhancement endeavors are currently underway without sufficient preliminary research
- Abiotic variability is a prominent feature of these estuaries
- Temperature, dissolved oxygen and salinity might play influential roles in the survivorship of the juvenile snook

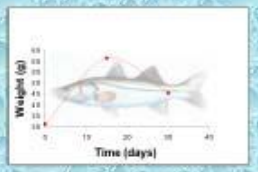
STUDY SITES

METHODS

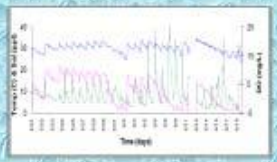
1. Juvenile snook are raised to fingerlings (100-200 mm) in the aquaculture facility
2. All snook are tagged with identifying markers for individual growth measurements
3. Fish are placed in cages within variable habitats at the research sites for 40 days
4. Fish are weighed and measured for growth

RESULTS

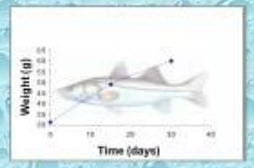
North Creek Lower (High Variability)



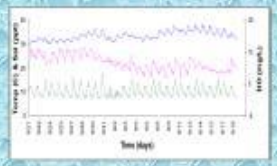
Negative Growth:
Dissolved Oxygen (mg/L)
0-22
Salinity (ppt)
2-21
Temp (°C)
25-34



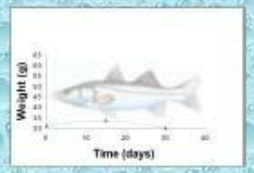
North Creek Middle (Medium Variability)



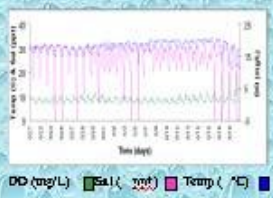
Positive Growth:
Dissolved Oxygen (mg/L)
0-8
Salinity (ppt)
16-28
Temp (°C)
30-38



North Creek Upper (Low Variability)



Slow Growth:
Dissolved Oxygen (mg/L)
0-4
Salinity (ppt)
16-30
Temp (°C)
26-33



CONCLUSION

- **Snook exhibit increased growth in habitats with a medium degree of abiotic variability**
- **Stock enhancement projects will be more efficient by releasing juvenile snook primarily in nursery habitats with a medium degree of abiotic variability**

PREVALENCE OF OBESITY AMONG INNER CITY LATINO CHILDREN AND ADOLESCENTS

Nazrat M. Mirza MD, ScD, Jill Merchant MS, Laila Baker, PhD
Children's National Medical Center and George Washington University School of Medicine and Health Sciences, Washington, DC

Background

Purpose of Study:

Study Design

Results

Results continued

Conclusions & Recommendations

Early Outcomes of the First 1471 Consecutive Kyphoplasty Procedures in the United States for the Fixation of Painful Osteopenic Vertebral Body Compression Fractures (VCF)

Steven R. Garfin[1], M.D., Isador H. Lieberman[2], M.D., Mark A. Reiley[3], M.D., Joseph M. Lane[4], M.D., Frank W. Phillips[5], M.D., Hallett B. Mathews[6], M.D., Hansen A. Yuan[7], M.D., Barton H. Sachs[8], M.D., for the Kyphoplasty Study Group

[1]University of California, San Diego, Medical Center, San Diego, CA; [2]Cleveland Clinic, Cleveland, OH; [3]Berkeley Orthopedic Medical Group, Berkeley, CA; [4]Hospital for Special Surgery, New York, NY; [5]University of Chicago Spine Center, Chicago, IL; [6]Mid-Atlantic Spine Specialists, Richmond, VA; [7]State University of New York Health Sciences Center, Syracuse, NY; [8]Albany Medical Center, Albany, NY

BACKGROUND

- 700,000 VCF's per year
- 275,000 diagnosed, >80% due to pain
- Spinal deformity associated with
  - Significant morbidity
  - 23% increased mortality (Kado, Ann Int Med 1999)
- Current treatments ineffective
  - Open surgeries fail
  - Medical management palliative
- Vertebroplasty
  - Bilateral transpedicular cement fill
  - Relieves pain
  - Requires high pressure and runny cement
  - High risk of cement leaks
    - Up to 73% where documented (Weill et al., Radiology 1997)
  - Major complications (Chiras, J Int Neurorad 1997)
    - 1.3% in osteoporosis
    - 10% in metastatic cancers

KYPHOPLASTY

Kyphoplasty is a minimally invasive orthopedic procedure for reducing and fixing painful vertebral body compression fractures secondary to osteopenia. Using a posterior approach, one or two inflatable Bone Tamps (Fig. 1) are inserted into the fractured vertebral body, generally using a bilateral transpedicular approach (Fig. 2). The surgeon carefully inflates the balloon tamps (Fig. 2) using radiopaque contrast medium with image, volume and pressure control. The increased balloon tamp volume compacts the inner cancellous bone as it pushes the fractured outer cortical bone back toward its normal position. The inflation path is also controlled by placement, volume and balloon design. After reduction, the balloon tamp is removed, and the resulting void is filled with thick PMMA under fine manual control and low pressure. The steps of Kyphoplasty are illustrated in Fig 3.

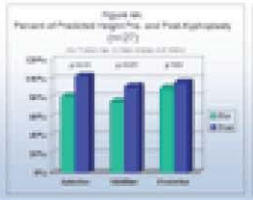
Fig. 1

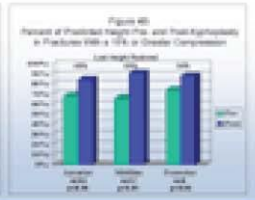
Fig. 2

Fig. 3 Kyphoplasty Using the IBT

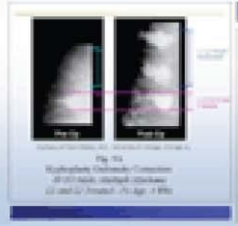
STUDY DESIGN AND METHODS

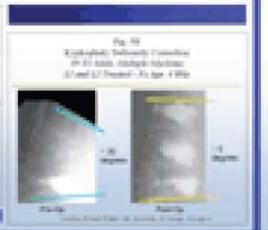
A retrospective multi-center review to assess early outcomes with Kyphoplasty. Pain was localized by physical examination. The presence of marrow edema and collapse was confirmed on MRI. General or deep local anesthesia was chosen based on anatomy, number of levels and patient status. The first 135 patients at our centers were asked to characterize their back pain as improved, the same or worse 24 hours post-op and at last follow-up. Fractured and nearest normal vertebral body heights were measured anterior, midline and posterior in the first 27 vertebral body fractures treated by one surgeon (MAR). The height of the nearest normal vertebral body was used to calculate the % of predicted height for all the vertebral bodies (Fig. 4A) and for the sub-set where which had lost 15% or more of height before treatment (Fig. 4B).





The pre-treatment height was subtracted from the predicted height, then divided by the post-treatment height subtracted from the predicted height, to find the percentage of lost height restored. One set of X-rays by one surgeon (FMP) are used to show an example height restoration (Fig. 5A) and deformity correction (Fig. 5B). Device-related major complications from all procedures are reported. PMMA leaks in the first 70 procedures performed by one surgeon (IHL) were assessed with X-ray and MRI.





PRELIMINARY RESULTS

CONCLUSIONS

Kyphoplasty is an important treatment option that provides immediate mobility and return to activities of daily living to patients with acutely painful vertebral body compression fractures secondary to osteopenia. Kyphoplasty facilitates fracture reduction and deformity correction. While reduction is more likely in acute fractures (four months or less), it has been seen in fractures over one year old. Kyphoplasty also provides rapid pain relief in the nearly all patients, and this result is independent of fracture reduction. The safety profile of Kyphoplasty compares favorably to the published safety profile of vertebroplasty.

LESSONS LEARNED FROM AIRWAY PRESSURE RELEASE VENTILATION (APRV)

Lewis J. Kaplan, MD[1,2], Heatherlee Bailey, MD, FAAEM[1]
Medical College of Pennsylvania-Hahnemann University
Departments of Surgery[1] and Emergency Medicine[2], Philadelphia, PA USA

INTRODUCTION

Airway Pressure Release Ventilation (APRV, a.k.a. BIPAP) has been previously demonstrated to be a useful modality in managing patients with acute lung injury (ALI) or the acute respiratory distress syndrome (ARDS). As this is a fundamentally different mode than conventional cyclic ventilation, we reviewed a single institution's experience with APRV to determine safety, complication detection, and efficacy at resolving hypoxemia and hypercarbia.

METHODS

Consecutive patients transitioned from either volume or pressure targeted ventilation to APRV (Dräger Evita 4 Pulmonary Workstation) at a University hospital surgical ICU were retrospectively reviewed. Patients initially ventilated with APRV were excluded. Initial ARPV settings to correct hypoxemia ($pO_2 \leq 60$ torr on $FIO_2 \geq 0.9$) were a P_{high} at the prior plateau pressure, a T_{high} of 6.0 sec and a T_{low} of 0.8 sec. Hypercarbic ($pCO_2 \geq 55$ torr and $pH \leq 7.3$) patients were set to a T_{high} of 5.0 sec and a T_{low} of 1.0 sec. Settings were adjusted to resolve hypoxemia and hypercarbia. IRB approved abstracted data included principal diagnoses, ventilator parameters, laboratory values and ventilator associated complications. Data before and after APRV were compared using a two-tailed paired t-test or Chi-square as appropriate; significance was assumed for $p < 0.05$ ($^{[3]}$).

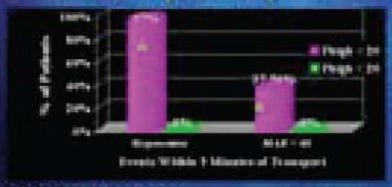
RESULTS

Demographics

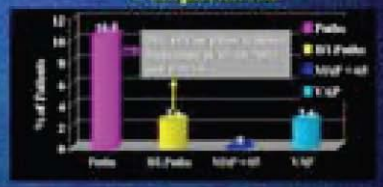
APRV

Element	Value
% Hypoxemia	88%
% Hypercarbia	12%
Time to $S_pO_2 \geq 92\%$	7 ± 4 min
Time to $FIO_2 \leq 0.6$	5.2 ± 6.9 hr
Time to $pCO_2 \leq 40$ torr	42 ± 7 min
Time to max Δ pCO_2	76 ± 12 min
Mean change in V_E	-5.3 ± 0.9 L/min[4]

Transport Safety



Complications



CONCLUSIONS

1. APRV is a safe rescue mode for hypoxemic or hypercarbic respiratory failure and requires a significantly lower V_E than conventional ventilation.
2. Decreasing release phase volumes and a rising pCO_2 are strong indicators of pneumothorax in a patient on APRV. Routine end-tidal CO_2 monitoring is recommended.
3. Preparation for safe intra-hospital transport may be keyed to the P_{high} required for oxygenation and ventilation. Patients requiring a $P_{high} > 20$ cm H_2O should be transported on the ventilator.

No Equations

$$
\begin{aligned}
X' &= A * B \\
&= (A - (2^p - 1)) * (B - (2^q - 1)) \\
&= AB - B(2^p - 1) - A(2^q - 1) + (2^p - 1)(2^q - 1) \\
X'' &= (A - E_p)(B + Eq) \\
&= AB + AE_q - BE_p - E_pE_q \\
&= AB + AE_q - (BE_p + E_pE_q) \\
&= AB + AE_q - \frac{E_pE_q}{2} - \left(BE_p + \frac{E_pE_q}{2}\right)
\end{aligned}
$$

$$
f(X', X'') = \frac{\Gamma}{2} \sum \frac{\frac{X'^{\delta\alpha \max(\phi^2)}}{X''_{\Gamma^{3/2}}} \sum \epsilon \sqrt{AB + AE_q - \frac{E_pE_q}{2} - \left(BE_p + \frac{E_pE_q}{2}\right)}}{\int_R \phi\rho f(\vec{X}|S_k) \frac{1}{(2\pi)^{d/2}\sigma^d} * \frac{1}{P_k} \sum_{i=1}^{P_k} \exp\left[-\frac{(\vec{X} - \overrightarrow{W_{ki}})^T (\vec{X} - \overrightarrow{W_{ki}})}{2\sigma^2}\right]}
$$

- Ummm… okay…

Speelchick

- How samrt will poeple thikn yuo are?

- Watch for:
  - there/their/they're
  - too/to/two
  - its/it's
  - Have a friend/TA/Instructor check (and give them enough time to do it)

Final Sweep

- Spell Check and then spell check again!!
- Use “association” rather than “correlation”
- Remove all first person!
- Causal language
  - remove completely from your results
  - may be presented as a possibility in your Background or Discussion (in context of limitations).