

# Understanding Views on Sentience and Conservation: A Study of Emotional Experiences with Wildlife

## Authors

Cpcc'Tgkm{.'Cpplg'N{pej . 'Mcvk'Tlej ctf u.'P gmg'F qwi rcu. cpf 'Nk{ 'Lghgt {

Gpxkqpo gpvcn'Uwf kgu'Rtqi tco . 'Dquvq'Eqmgi g.'Dquvq. O C.'24689.'WUC

## Corresponding Author

Igppkgt'Tgdgeec'Uej cwtg.'649'O eI wkpp.'F gr ctvo gpvqh'Uqekqmi {.'Dquvq'Eqmgi g.'Dquvq. O C'24689=[ngm{ clhB deQf w](#)

## Authors' Contributions

CT.'CN.'MT.'P F.'cpf 'NL'f guki pgf 'vj g'r tqlgev'cpf 'eq/y tqvg vj g'o cpwuetkr 0

## Running Title

Xlgy u'qp'Ugpkpeg'cpf 'Eqpugtxcvqp

## Keywords

Ugpkpeg="eqpugtxcvqp="dkqf kxgtuk{ =y kf rkhg="eqgz kvgpeg

## Word Count

; 54:

## Article Impact Statement

Vj ku'r cr gt'kf gpvkhgu'cpf 'o gcuwtgu'oj wo cp'r gtegr vkpu qh'cpko cn'ugpkpeg.ö'kpvkpi "cp go qvkpcn'cr r tqcej "q'tghgevkpu'qp'y kf rkhg'kpvgtcevkpu. eqpugtxcvqp."cpf "dkqf kxgtuk{0

## Acknowledgements

Vj g'tgugctej gtu'y qwf 'rkhg'v'vj cpn'Rtqhguaqt'Igppkgt Uej cwtg.'vj g'Gpxkqpo gpvcn'Uwf kgu r tqi tco . 'Rtqhguaqt'Vctc'RkucpkI ctgcw.'qwt'hgmy Ugpkqt'Tgugctej 'Ugo kpc't'encuo cvgu."cpf "qwt r ctvkr cpw'hqt'vj gk'eqpvtkdvwkqpu'v'qwt'uwf {0



## Problem

Cu'j wo cpu"eqvkw'q"gpctqcej 'w qp"pcwtcrif cdkcu.

ugpvkpv'dgkpi u'lp'qtf gt'vq'tgeqi pk g'qwt'eqo o qp'r meg'qp'Gctvj 0Y kj lp'y ku'eqo o wpkv'ugvki .  
y g'y cpv'q'hqvg't'o gcpki hwt'ghgevkpu'cdqw'j wo cp/cpk cnkpvgtcev'qpu'vj cv'y knkphwpeg  
r ctvek cpw'qy p'nxgu0k'qwt'ecm'hqt'y tkwgp'pcttcv'xgu. y g'ctg'j qr kpi 'vq'j cxg'cp'ko o gf kvg  
ghgev'qp'dqj 'vj g'tgugtej gtu'cpf "'vj g'r ctvek cpw'0Dwrf kpi 'qh'h'qh'Tlej ctf uqp'kf gcu.'vj g  
tgugtej gtu'dgn'xg'vj cv'y g'y tkkpi 'r tqegu'y knkpk'cv'f kvexgt { 'hqt'vj g'r ctvek cpw.'kpv kt g  
eqppgev'qp'dgy ggp'j wo cp'r ctvek cpw'cpf 'ugpvkpv'k'g.'cu'y gml'cu'r tqf weg'o gcpki 'cpf 'etgcv  
pgy 'cy ctgpgu'qh'tgcrk' 'lp'vj g'r tqegu'\*Tlej ctf uqp. 4223-0Vj g'tgugtej gtu'cempqy ngf i g'vj cv  
y tkkpi 'ecppqv'dg'wv'k'p'gf 'h'qo 'vj g'h'g'g'zr gtlgpegu qh'vj qug'y d

vq'cempqy rñfi g'cpf 'uj ctg'vj g'r gtuqpcnr gtur gevkgu'qh'cm'tgugctej gtu'kpxqkxgf . 'j g'gk0Gcej  
cwj qt'dtkpi u'wpls w'g'zr g'kgegu.'gf wecvkp.'cpf 'go qvqp vq'vj g'vcdrg0Uj ctkpi 'vj gug'r gtur gevkgu  
etgcvgu'c'o qtg'qr gp'cpf 'r gtuqpcnr'eqppgev'k'p'dgwy ggp vj g'tgugctej gtu'cpf 'vj g'tgcf gtu'k'vj g'kt  
y qtm'Vtngxu'cpf 'eqmgi wgu'kpenf g'c'ugev'k'p'y j g'g vj g{'cempqy rñfi g'cpf 'uj ctg'vj g'kt'xct{kpi  
qr kpkpu'cpf 'xky r qkpw'qp'vj g'vqr k'qh'r tgugtxcvk'p'0Vj g'cwj qtu'uj ctg'vj cv'y j k'g'vj g{'cm'ctg  
r cuukqpcv'cdqw'vj g'uwdlgev'cpf 'ctg'eqpvtkdwkpi k'pvmgewcne'eqpv'v'q'vj g'ctv'eng.'vj g{'ctg'p'qv  
cm'r gthge'v'c'ri pgf 'k'p'vj g'kt'xky u'qh'p'qp/j wo cp cpk' cni'ki j u'v'Vtngxu'gv'c'ri'423; +0Uko k'c'ri'.  
y g'j qf 'xct{kpi 'qr kpkpu'cpf 'd'g'k'hu'qp'vj g'vqr k'qh'p'qp/j wo cp'cpk' cni'ugpv'k'peg'cpf  
eqpugt'xcv'k'p'0Vj wu.'Vtngxu'cpf 'eqmgi wgu'j cxg'k'pur k'gf vj k'u'ugev'k'p.'y j k'ej 'y g'j cxg'ej qugp'v'q  
f gf k'cv'g'v'vj g'r gtuqpcnr'pctt'cv'kgu'qh'vj g'tgugctej gtu'0

Lghgt {'d'g'k'x'gu'vj cv'f geqput'w'v'kpi 'vj g'f g'gr n{/tqq'v'f . j k'gt'ctej k'c'ni't'g'v'k'p'uj k' 'dgwy ggp  
j wo cpu'cpf 'p'qp/j wo cp'cpk' cni'ku'gu'ugpv'k'ri'0G'ko k'p'v'kpi vj gug'r t'ge'q'peg'k'x'gf 'p'q'v'k'pu'qh'j wo cp  
u'w' g'k'q't'k'v' 'cpf 'r'g'c'p'kpi 'k'p'v'vj g'ugpv'k'p'v'p'c'w't'g'q'h'cm'd'g'kpi u'y k'ni'cm'qy 'cm'ur g'el'gu'v'q'eq'gz'ku'v'qp  
G'ct'vj 'k'p'c'eqo r cuukqpcv'g'o c'ppgt'cpf 't'gf'w'eg'vj g'ug'x'gt'g j c'd'k'c'v'f k'ut'w'v'k'p'cpf 'u'wd'ugs'w'gpv  
d'k'q'f k'x'g't'uk'v' 'i'qu'u'y g'ew't'g'p'v' 'h'ceg'0

F qwi r'cu'cti w'gu'vj cv'ugpv'k'peg'k'u'vj g'ut'q'pi gu'v'eqppgev'k'p' u'j ct'gf 'dgwy ggp'j wo cpu'cpf  
p'qp/j wo cp'cpk' cni'v'j wu.'k'ku'vj g'f w'v' 'qh'j wo cpu v'q't'ge'qi p'k' g'vj cv'uj ct'gf 'ugpv'k'peg'k'u'k'p'f k'ge'v  
eq'p'h'le'v'y k'j 'c'p'vj t'qr q'eg'p't'kuo . 'y j k'ej 'j cu'f t'k'x'gp'vj g'f g'ut'w'v'k'p'q'h'p'c'w't'c'ri'j c'd'k'c'w'0Y j k'g  
eq'p'egr w'q'h'ugpv'k'peg'o c{'d'g'v'q'q'c'd'ut'c'ev'cpf 'h'q't'g'ki p' h'q't' 'u'q'o g'k'p'f k'k'f w'cnu'v'q'qr g'p'n' 'go d't'ceg.  
T'g'k'm' 'ci t'g'gu'y k'j 'F qwi r'cu'vj cv'c'w'k'w'f gu'v'qy c't'f u'j wo cp/cpk' cni't'g'v'k'p'pu'o w'u'd'g't'ge'q'p'uk'f g't'gf  
d{'vj g'eqo o q'p'r q'r w'v'k'p'q'h't'g'c'ni'eq'p'ugt'xcv'k'p'v'q q'ew't'0T'g'k'm' 'h'g'gu'vj cv'c'p'vj t'qr q'eg'p't'kuo 'ku'v'q  
f g'gr n' 'k'pi t'c'k'p'gf 'k'p'v'q'f c{'v'q'ek'v'k'gu'vj cv'k'p'f k'k'f w'cnu o c{'p'g'gf 'v'ko g'v'q'c'een'ko cv'g'v'q'vj g'uj k'k'pi

r ctf ki o . "qt "gnug" yj g{ 'o c{ 't'gl'gev' yj gug'kf' gcu'qwtki j 0Vj wu. "T gkm{ 'hggnu' yj cv' yj g' dguv' cr r tqcej 'ku  
vq' gcug' r gqr rg' kp' vq' yj gug' f' kuewuukqpu. "gur gekm{ kh' yj g{ "ctg' vphco kktct' y' kj ' yj g' vqr' leu0

N{ pej 'ku' eqo r gmgf 'vq' f' geqpust wev' f' qo kpcpv' ur gekgu ecv' gi qtkgu' c' pf ' y' qtm' ci clpuv' yj g  
j wo cp' gzege' v' kqpcrku' h' tco gy qtn0' k' ur k' gf ' d{ ' yj g' y' qtm' qh' M' k' mug{ ' c' pf ' J' gm' t' g' lej ' \*4232+ ' N{ pej  
j q' r' gu' vq' dt' k' pi ' k' p' r' g' tur' ge' v' x' gu' qh' ' gs' wcrk' v' . ' t' gr' n' c' k' pi ' yj g' r' c' pi' w' ci' g' qh' ' p' q' pj' wo' cp' ' ur' gekgu' y' kj  
o w' m' kur' gekgu' v' p' f' g' tu' w' c' p' f' k' pi' 0C' f' f' k' k' q' p' c' m' f' . ' k' v' k' u' k' o' r' g' t' c' v' x' g' vq' ' c' f' x' c' p' e' g' ' q' w' t' ' Y' g' u' g' t' p' r' w' d' r' k' e  
w' p' f' g' tu' w' c' p' f' k' pi' ' qh' ' c' p' k' o' c' n' i' u' g' p' v' k' g' p' e' g' ' d' g' { ' q' p' f' ' w' k' k' c' t' k' c' p' x' c' n' w' c' v' k' p' ' qh' ' ur' gekgu. "c' p' f' ' v' q' y' c' t' f' u' c' p'  
w' p' f' g' tu' w' c' p' f' k' pi' ' qh' ' o' w' m' kur' gekgu' c' u' i' q' q' f' ' v' q' r' k' x' g' y' k' j . c' p' f' ' c' o' q' p' i' ' \*M' k' mug{ ' c' p' f' ' J' gm' t' g' lej . ' 4232+0

T' l' e' j' c' t' f' u' d' g' r' i' g' x' g' u' yj' c' v' yj' g' d' k' p' c' t' k' g' u' yj' c' v' g' z' k' u' v' u' g' r' c' t' c' v' k' pi' p' q' p' j' wo' cp' ' c' p' k' o' c' n' i' h' t' q' o' ' j' wo' c' p' u  
c' t' g' j' c' t' o' h' w' i' h' q' t' ' c' m' i' ur' gekgu' 0' k' u' k' p' ' c' m' i' ur' gekgu' d' g' u' v' k' p' v' g' t' g' u' v' yj' c' v' u' w' e' j' ' d' k' p' c' t' k' g' u' c' p' f' ' j' k' g' t' c' t' e' j' k' g' u' c' t' g'  
f' k' u' o' c' p' v' r' g' f' ' d' g' e' c' w' u' g' ' c' m' i' r' k' x' g' u' j' c' x' g' ' l' p' j' g' t' g' p' v' x' c' n' w' g' 0' T' l' e' j' c' t' f' u' j' q' r' g' u' yj' c' v' g' p' i' c' i' k' pi' ' k' p' ' e' t' k' l' e' c' n' i' c' p' f'  
g' p' t' l' e' j' k' pi' ' e' q' p' x' g' t' u' c' v' k' p' u' c' d' q' w' ' c' p' k' o' c' n' i' u' g' p' v' k' g' p' e' g' ' k' u' c' p' ' k' o' r' q' t' c' p' v' u' g' r' ' k' p' ' d' t' g' c' n' k' pi' ' f' q' y' p' ' yj' g' u' g'  
v' t' c' f' k' k' q' p' c' n' i' d' c' t' t' k' g' t' u' 0

### Trends in Existing Literature

Vj g'gz' k' u' k' pi' ' d' q' f' { ' qh' t' g' u' g' c' t' e' j' ' g' z' r' m' t' g' u' yj' g' t' q' r' g' ' qh' x' c' n' w' g' u' . ' c' v' k' w' f' g' u' . ' c' p' f' ' f' k' t' g' e' v' k' p' v' g' t' c' e' v' k' p' u  
q' p' ' yj' g' t' g' r' v' k' p' u' j' k' r' ' d' g' y' g' g' p' j' ' j' wo' cp' ' c' p' f' ' p' q' p' j' wo' cp' ' e' t' g' c' w' t' g' u' . e' k' k' g' p' ' o' q' p' k' q' t' k' pi' . ' c' p' f'  
e' q' p' u' g' t' x' c' v' k' p' ' r' t' c' e' v' k' e' g' u' 0' Vj' g' t' g' ' c' t' g' ' c' ' x' c' t' k' g' v' { ' qh' t' g' p' f' u' g' u' r' gekm{ ' u' c' n' i' g' p' v' v' q' ' h' w' w' t' g' t' g' u' g' c' t' e' j' ' q' p' ' yj' g'  
t' q' r' g' ' qh' u' g' p' v' k' g' p' e' g' ' k' p' ' o' q' v' k' c' v' k' p' u' h' q' t' ' d' g' w' g' t' ' v' t' g' c' v' o' g' p' v' qh' y' k' f' r' k' h' g' 0' P' wo' g' t' q' w' u' w' f' k' g' u' j' k' i' j' r' k' i' j' v' yj' g'  
k' o' r' q' t' c' p' e' g' ' qh' ' e' q' o' r' c' u' u' k' q' p' ' k' p' ' j' wo' cp' ' c' v' k' w' f' g' u' ' v' q' y' c' t' f' u' y' k' f' r' k' h' g' . ' t' g' r' q' t' v' k' pi' ' g' o' q' v' k' p' c' n' i' x' c' t' k' e' d' r' g' u' c' u'  
y' j' g' u' t' q' p' i' g' u' v' r' t' g' f' k' e' v' q' t' ' qh' y' k' f' r' k' h' g' ' o' c' p' c' i' g' o' g' p' v' qh' j' q' w' u' g' ' ur' c' t' t' q' y' u' = c' p' f' . ' yj' c' v' j' wo' cp' ' g' o' r' c' v' j' {  
v' q' y' c' t' f' ' c' p' k' o' c' n' i' c' p' f' ' u' t' q' p' i' g' t' ' h' g' g' r' k' pi' u' c' d' q' w' u' g' p' v' k' g' p' e' g' o' c' { ' r' g' c' f' ' v' q' ' d' g' w' g' t' ' v' t' g' c' v' o' g' p' v' qh' ' c' p' k' o' c' n' i'  
\*N' c' t' u' q' p' ' g' v' c' r' i' 0' 4238= E' q' t' p' k' u' j' ' g' v' c' r' i' 0' 423: +0' G' o' r' c' v' j' g' v' k' e' v' t' g' c' v' o' g' p' v' qh' ' c' p' k' o' c' n' i' g' z' v' g' p' f' u' v' q'









r ctvkr cpw'vj tqwi j "eqpxgplgpeg"uco r npi . "cu'vj g'tgugctej gtu'lwtxg{ gf "cwgpf ggu'vq"cp"cpko cn  
y gntctg'u{o r qukwo "423: +0Kp'dqvj "uwf lgu."r ctvkr cpw j cf "ctgcf { "f go qputcvgf "c'uki pklcepv  
kpvgtguv'lp"cpko cni'cpf "cpko cni'y gmlgkpi . "y j lej 'ko r cevgf tguwu"\*Nctuqp"gv'cni"4238=Eqtpkuj "gv  
cni"423: +0Qwt'uwf { "y km'dg'htqo "c'o qtg'o kzgf "dceni tqwvf qh'r gqr ng'y kj "xctkqu'kpvgtguu."pqv  
lwv'ko kgf "vq'r gqr ng'y j q"ctgcf { "uj qy "ur gekni'kpvgtguv'lp"cpko cni

### Areas for Further Study

Y j kg'vj g'rkgtcwtg"qp'y kf rkhg"eqxgtu'dqvj "c'tcpi g qh'uwvqr leu'cpf "eqpukf gtcdrf" f gr vj  
kp'ur gekle"ctgcu."uki pklcepvi cr u'r gtukn0Ur geklecm{ . vj gtg'ku'o wej "vq'dg'uwf kgf "qp'vj g  
r gtegr vkp"qh'cpko cni'ugpvkpeg'd{ "j wo cp'dgkpi u."j qy vj ku'ko r cevu'j wo cp/cpko cni'grvkpuj kr u.  
cpf "y j cv'ghgevu'vj ku'j cu'qp"eqpugtxcvkp"ghqtu cpf "cy ctgpguu0Nctuqp"cpf "eqmgci wgu'cpcni'uku  
qh'gzr gtlgp'kni'hcexqtu'uw r qtu'vj g'dgrkgh'vj cv'gzr gtlgpegu y kj "y kf rkhg'utgpi vj gp"chgevkxg"cpf  
go qvkpcni'tgur qpugu'vq'y kf rkhg'uko wk"\*Nctuqp."gv'cni"4238+0Vj ku'uwf { "qr gpu'wr "cp'ctgc'ht  
tgugctej "qp'vj g'tqng'qh'wvf gtucpf kpi "cpf "cr r tgekvkq qh'ugpvkpeg'ht"vj g'htto cvkq"qh  
go qvkpcni'f kur quk'kpu'cpf "cvkwf gu'vqy ctf "y kf rkhg0Vj g'y qtn'qh'Eqtpkuj "cpf "eqmgci wgu  
ulo krcni' "etgcvgu'vj g'r qvgp'kni'ht'hw'vj gt'tgugctej qp'y j cv'gzcew' "o qv'xcvgu'r gqr ng'vq"eqppgev'vq  
cpko cni'ugpvkpeg"\*423: +0Y j kg'vj g'tgugctej gtu'gzco kpg f go qi tcr j le'hcexqtu'vj cv'kphwpeg

r t g x l q w u n { ' d g g p ' c w g o r v g f ' k p ' q v j g t ' t g u g c t e j 0 Y g ' y k m l r t q o r v ' j g ' u w f { ' r c t v l e k r c p w u ' v q  
v j q w i j v h w m { ' t g h r g e v ' w r q p ' v j g k ' k p v g t c e v k a p u ' y k j p q p j w o c p ' y k f r k h g ' c p k o c n u 0 Y g ' y c p v ' v q ' e c m  
c v g p v k a p ' v q ' v j g ' w p k s w g ' g p g t i g l e ' d a p f ' v j c v ' k u ' u j c t g f d g w y g g p ' y q ' u g p v k e p v ' d g k p i u 0 Y g ' y k m  
g p e q w t c i g ' q w t ' r c t v l e k r c p w u ' v q ' d t k p i ' c p ' g x g t ' r t g u g p v c y c t g p g u u ' q h ' e q p u e k q w a p g u u ' v j c v ' c m l h k k p i  
e t g c w t g u ' r q u u g u u 0 Y g ' j q r g ' v j c v ' v j k u ' j g k i j v g p g f ' c y c t g p g u u e c p ' r g c f ' v q ' o q t g ' o g c p k p i h w n  
f k u e w u k a p . ' t g h r g e v k a p . ' c p f ' e q p v k p w g f ' o w w c m { ' d g p g h e k e n k p v g t c e v k a p u ' d g w y g g p ' q w t ' u w f {  
r c t v l e k r c p w u ' c p f ' c p { ' p q p j w o c p ' y k f r k h g ' c p k o c n u ' v j g { o c { ' g p e q w p v g t 0

### Research Question

Y j c v ' o q v k c v g u ' r c t v l e k r c p w u ' v q ' e q p p g e v ' v q ' c p k o c n u ' g p v k e p e g . c p f ' j q y ' e q w f ' v j k u  
o q v k c v k a p ' r g c f ' v q ' d g w g t ' t g c w o g p v ' q h ' y k f r k h g ' A Y g j q r g ' v q ' c f f ' v q ' g z k u k p i ' h v g t c w t g ' d { ' h k k p i ' v j g  
i c r u ' e q p e g t p k p i ' v j g ' g o q v k a p c n i k o r c e v ' q h ' y k f r k h g ' k p v g t c e v k a p c p f ' c e v k a p c d r g ' g h g e w ' v j k u ' j c u ' q p  
j w o c p ' d g k p i u ' v q y c t f u ' e q p u g t x c v k a p ' c p f ' y k f r k h g ' j c d k c v r t q v g e v k a p 0 K g c m { . ' y g ' y k m k f g p v k h {  
r c w g t p u ' c p f ' t g p f u ' k p ' y k f r k h g ' k p v g t c e v k a p u ' v j c v f g o q p u t c v g ' g h g e v k g ' y c { u ' v q ' g p e q w t c i g

qwt'r ctvlek cpwøqxgtcm'gzr gtlgpeg'y kj 'yj g'uwwf {0Dquxqp'Eqrngi g'uwwf gpw'ctg'wpls wg'lp'yj gk  
cdkxv\ 'vq'tghgeev.'eqo o wplkcvg.'cpf "go r cvj k g'y kj qyj gtu0Cm'Dquxqp'Eqrngi g'uwwf gpw'ctg  
tgs wktgf 'vq'eqo r rvg'yj g'Eqtg'Ewtkewnwo 'y j lej 'hqvgtu etklecn'yj kpnkpi 'unkm'cpf 'yj g'cdkxv\ 'vq  
eqo r cuikqpcvgn\ 'eqo o wplkcvg'kf gcu00 qtgqxtg.'yj g'Lguwkvxcnwgur tqo wni cvgf 'yj tqwi j qw  
Dquxqp'Eqrngi g'r ræg'c'utqpi "go r j cuku"qp'ugtxleg vq"qyj gtu'cpf 'y qtnkpi 'vq'o cm



**Data Collection Methods**

Rctvlekr cpwu'y gtg'kpxkxgf "xlc"vzv."go ckn'y qtf/qh'o qwj . cpf "uqekcn'o gf kc"vq'r quv'y gk  
y kf rkhg'kpvgtcevkpu"v'y'j g'Hcegdqnmf tqwr 0Rctvlekr cpwu y gtg'cungf "v'uj ctg'pcttcvxgu."r j qvqu.  
xkf gqu."qt"cwf kq'hkngu"cpf "r tqo r vgf "v'tghngev"qp vj g"go qvqpcn'gzr gtlgpegu"qh'y gk'y kf rkhg  
kpvgtcevkpu0C"eqo o qp"dcttkgt "hqt"ekkl gp"uekpeg tgugctej "ku'uwuclkgf "gpi ci go gpv'cpf  
eqo o ko gpv'qh'r ctvlekr cpwu"Rcrgeq'gv'cn0"4243+0Y g'clo "v'cf f tguu'v'j ku'ej cmgpi g'd{ "qhhgtkpi  
o wnk r g'r tqlgv'gpv{ "r qkpw'cu'y gm'cu'o wnk r g y c{ u'v'v' r ctvlekr cvg'cvf khhgt gpv'rgxgnu'qh  
eqo o ko gpv'lp'y'j g'Hcegdqnmf tqwr "Rcrgeq'gv'cn0"4243+0Gzco r ngu'qh'r ctvlekr cvkqp"dg{ qpf  
r qukpi "kpenmf g'kpvgtcevkpi "y kj "qyj gt'r quu'v'j tqwi j rkhgu"cpf "eqo o gpwu."y v'ej kpi "rkxg'utgco  
xkf gqu'j quv'f "d{ "v'j g'tgugctej gtu."cpf "tghgtkpi "qyj gt r ctvlekr cpwu"v'y'j g'i tqwr 0F cvc"eqmgevkap  
dgi cp"qp"Qevqdg"36."4242"cpf "eqpenmf gf "qp"Cr tkn36. 42430

**Data Analysis**

Cp"guugpvlekr ctv'qh'qwt "f cvc"cpcn{ uku'o gj qf "ku'eq/etgcvkap. y j lej "cmqy u'qwt"uwf { "vq  
dwnf "c'tlej "pcttcvxg"dgvy ggp'v'j g'r ctvlekr cpwu"cpf vj g'tgugctej gtu"D3/kluj /Dtgf plej ."423: +0  
D3/kluj /Dtgf plej "go r j cuk gu'v'j cv'wpeqpxgpvqpcn'o gj qf u qh'pcttcvxg"gy pqi tcr j { "ctg'kp  
v'pukqp'y kj "v'j g'pggf "hqt"gy pqi tcr j le'tgugctej "vq dg'v'cmgp"ugtqwan{ "cu'c"uqekcn'uekpeg  
"D3/kluj /Dtgf plej ."r 0; ."423: +0Y j krg"{ gv'c"pcttcvxg dguv'ecr wtgu'v'j g"go qvqpu"gzr tguugf "d{  
r ctvlekr cpwu'tgi ctf kpi "v'j gk'y kf rkhg'kpvgtcevkpu. cpf "ku'o quv'tvg"v'y'j g'pcwtg'qh'ugpvkpeg0  
Hwv'j gto qtg."qwt"o gj qf u'hqmny "cp'kpwkxg"cpcn{ uku cr r tqcej "cu'qr r qugf "v'cpcn{ v'ecneqf kpi  
qh'y g'f cvc0D3/kluj /Dtgf plej "chko u'v'j cv'y j krg"okv'ku'vgo r v'kpi "v'v'wtp'uvqtkgu'kpv"f cvc"cpf  
f gxcnwg'v'j g'cev'qh'f ggr "kuv'gkpi "cpf "pcttcvxg"eqpvgo r r'v'kqp.ö vj g'r tqegu'qh'qtf gkpi "uvqtkgu  
kpv'pcttcvxgu'ku'dguv'i v'kf gf "d{ "c"s wcrkcvxg"cr r tqcej vj cv'f qgu'pqv'mug'v'j g"go qvqpu'lp'y'j g

r ctvkr cpvau'uvqtkgu'd{ 'f kuugevki 'vj go '\*D3pkuj /Dtgf plej . 'r 032."423: +0Qwt"cpcn{ uku'go r j cuk gu  
kpwkxg'y kuf qo u'y j kg'go r mq{ kpi 'tgugctej "eqpxgpvkp y j gp"cr r tqr tkvg0

Vj g'f cv'y cu'cuuguugf "wukpi "c'ugtkgu'qh's wrkcvxg s wgunkpu'vj cv'eqpukf gt'vj g'go qvkpu  
cpf "ugpvkpeg"dgj kpf "vj g'uvdo kwgf 'r j qvqi tcr j u.'xkf gqu. cpf "cwf kq'tgeqtf kpi u0S wgunkpu'vj cv  
i vkf g'qwt"fcv"cpcn{ uku'kpenwf g<y j cv'v{ r g'qh'y kf cpko cn'ku'uj qy p'AY j cv'ku'vj g'eqpvz'v'qh'vj g  
r j qvq'AY j cv'f qgu'vj g'eqo r qukkp"qh'vj g'r j qvqi tcr j uc{ "cdqw'vj g'tgrvkpuj k "dgwy ggp'vj g  
r gtuqp"cpf "vj g'cpko cn'AY j cv'ecr vkpu'cpf "uvqtkgu'ctg kpenwf gf AY j cv'go qvkpu'f'vj g









O gfk'V{r g	
Rj qvq	39
Xlf gq	5
P qpg	3
Eqmgi g'Cwgpf gf	
Dquqp'Eqmgi g	35
Qvj gt	6

**Trends**

**Trend 1: Key words about animal sentience**

Dgecwug'uwwf lgu'kp'vj ku'ctgc'qh'tgugctej 'j cxg'kpxgunki cvgf j wo cp'cempqy ngf i go gpv'qh cpko cnl'ugpvkpeg.'c'ej qugp'vj go g'ht'cpcn'uku'y cu vj g'wug'qh'vj g'y qtf 'ugpvkpeg'qt'c'tgrvfg cempqy ngf i go gpv'qh'pqp/j wo cp'cpko cnl'go qvqp'y kj kp vj g'f'guetkdgf 'kpvgtcevqp0Hqwtvggp.'qt 85085' . 'qh'vj g'r ctvkr cpw'eqo o gpvfg 'qp'vj g'r gtekgxf go qvqpu'qh'vj g'cpko cnl'qt'cpko cni'vj g{ gpeqwpvgtgf 0Vj g'uwwf { 'y cu'cm quv'gpvkn' 'eqo r qugf qh'hgo cmg'j wo cp'r ctvkr cpw'y j kej 'o c{ eqttgrv'q'vj g'o clqtk' 'qh'r ctvkr cpw'o cnl'pi 'ugpvkpeg/tgrvfg eqo o gpw0Eqtpkuj 'cpf eqmgi wgu'hqwpf 'vj cv'hgo cmg'y gtg'o qtg'rkng' 'q' gpi ci g'go qvqpcn' 'y kj 'pqp/j wo cp'cpko cni \*Eqtpkuj 'gv'cn'423: +0J qy gxgt.'pq'r ctvkr cpw'gzr rkn' wugf 'vj g'y qtf 'ugpvkpeg'kp'vj gkt pcttcvkg0Vj gtghqtg.'eqo o gpw'qp'cpf 'tgrvfg 'q'r gtekgxf go qvqp'cpf 'ur kkwcnl'pvtur gelgu eqppgevp'y gtg'eqpukf gtgf 'wvf gt'vj g'vj go g'qh'ugpvkpeg0

**Trend 2: Key words about human emotional experience**

Vj tgg'qh'vj g'44'r ctvkr cpw'\*35085' +y j q'ngw'pcttcvkg r quw'tgr qtvgf 'hggkpi 'go r cvj { hqt'cpqt#

j wo cp'lpvgtcevkqpu'y kj 'y kf rkhg'cpko cnu'cpf 'yj gk'j cdkcwoVj gtg'y gtg'ugxgtenr ctvlekr cpwu'y j q  
kpf kecvgf 'yj cv'y g{ 'hgn'cr r tgj gpukxg'qt'hgcthwi'cdqw yj gk'lpvgtcevkqpu'y kj 'y kf 'cpko cnu'Vj tgg  
r ctvlekr cpwu'qh'y g'44'vqcn'kpf kecvgf 'yj cv'y g{ 'hgn'pgtxqwu'qt'hgcthwi'ctqwpf 'cpko cnu'dw'y q'qh  
yj g'y tgg'tgr qtvgf 'wko cvgn' 'j cxkpi 'r qukkxg'hgnkpi u cdqw'yj g'lpvgtcevkqpu0

### ***Trend 3: Transformative effect of experience***

Dgecwug'r tgxkqwu'uwf lgu'umi i guvgf 'yj cv'r gtuqpcn'gZR gtlgpegu y kj 'y kf rkhg'j cxg'yj g  
r qy gt'vq'ej cpi g'j wo cpu'r gtur gevkgu'cpf 'cevkqpu'vqy ctf qyj gt'ur gekgu.'yj g'tgugctej gtu  
kpxguki cvgf 'yj g'v'cpuhqto cvkxg'pcwtg'qh'yj g'r ctvlekr cpwu) gZR gtlgpegu'\*Nctuq'g'v'cn0'4238=  
F qrd{ . '4242='Ueqw'g'v'cn0'4242-0'Qh'yj g'44'f guetk vkg pcttcvkgu. ': 'r ctvlekr cpwu\*5808' +  
gZR rlekn{ 'f guetkdgf 'c'v'cpuhqto cvkxg'ghgevtqo yj gk'gZR gtlgpeg'y kj 'y kf rkhg.'9'r ctvlekr cpwu  
\*530: ' +lpenmf gf 'pq'tghgtgpeg'v'c'v'cpuhqto cvkxg'ghgevtqo'v'gk'gZR gtlgpeg.'cpf 'yj g'tgo clkpi  
9'r ctvlekr cpwu\*530: ' +lpenmf gf 'ko r rlekn'tghgtgpegu v'v'g'gZR gtlgpegu'eqpvtkdwkq'v'v'gk'pgy  
r gtur gevkg0Ukz'qh'yj g'gki j v'v'cpuhqto cvkxg'gZR gtlgpegu kpxqkxgf 'c'j wo cpw'lpvgtcevkq'p'y kj 'c  
ur gekgu'yj g'r ctvlekr cpv'f qgu'pqv'ugg'qt'lpvgtcev'y kj qp'c'tgi wxt'dcuku0Cu'v'v'ku'tgugctej 'y cu  
eqpf wevgf 'lp'v'g'o kf uv'qh'yj g'EQXKF/3; 'r cpf go le.'vy q qh'yj g'gZR rlekn{ 'v'cpuhqto cvkxg  
gZR gtlgpegu'lpenmf g'tghgtgpegu'v'v'g'ko r qtvcpeg'qh'eqppgevkq'p'y kj 'qyj gt'ur gekgu'f wtkpi 'yj ku  
r gtlqf 'qh'kuqrcvkq0'Hkxg'qh'yj g'gki j v'v'cpuhqto cvkxg'gZR gtlgpegu'lpenmf gf 'gZR rlekn'tghgtgpegu'v'v'  
r gtuqpcn'cevkq'v'v'c'f'eqpugt'xcvkq0Qpg'v'cpuhqto cvkxg'gZR gtlgpeg'j'gir gf 'c'r ctvlekr cpv'hgn  
r gtuqpcn' 'eqppgevgf 'v'v'kf rkhg0'Vj gtg'y cu'cp'qxgty j gm kpi v'gpf 'lp'r ctvlekr cpwu'gZR gtlgpegu  
ecwulpi 'tghgevkq'qp'o wkur gekgu'eqgzkvgepeg0'Qh'yj g'eqo dkgf '37'gZR rlekn{ 'cpf 'ko r rlekn{  
v'cpuhqto cvkxg'gZR gtlgpegu. ': 'lpenmf gf 'c'tghgevkq qp'eqgzkvgepeg'cpf 'yj g'gh

Vj g'9'r ctvkr cpw'y j q'f kf "pqvtgr qtv'qp"vj g'tcpuhqto cvkxg'pcwtg'qh'vj gk'y kf rkg'g'zr gtlgpegu  
uj qy gf 'hgy 'eqo o qpcrkkgu0"Vj g'ur gekgu'gpeqwpvgtgf cpf 'mcecvkqu'qh'vj gug'pcttcvkgu'y gtg  
xctkgf 0Qpg'r ctvkr cpv'r qpf gtu'y j { 'c'upcr r kpi 'wtvrg tgvwtpu'v'vj gk' { ctf "qp'cp'cppwcn'dcuku0  
ōJ gtgā'o { 'vj qwi j v'ō c { dg'uj g'ej qqugu'qwt'my p'dgecwug y g'j cxg'vj g'qpn' 'pcwtcn'ry p'kp'vj g  
pgki j dqtj qqf #AP q'htvkr gt0P q'r guvkrf gu0P q'cp { vj kpi ō Cpqj gt'r ctvkr cpv'tgo ctngf "qp'c  
ugcn'cdkrk' { 'v'eqgzkv'y kj 'j wo cpu'kp'Nc'Lqmc<ō'Kuy co 'kp'vj g'y cvgt'cpf 'y cu'j qpgun'  
uwr tkugf 'd { 'vj g'ugcn'rcni'qh'j quvkrk' { 'cpf 'uggo kpi n' f lutgi ctf 'hqt'j wo cpu'uy ko o kpi 'kp'wej  
enug'r tqzko kv.ō0"Vj g'r ctvkr cpw'ctg'cdng'v'cempqy ngf i g cpf 'tghgev'qp'vj gk'g'zr gtlgpegu'y kj  
qjy gt'ur gekgu.'dw'f q'pqvtgr qtv'cp { 'gxf gpeg'qh'c ej cpi gf 'cvkwf g'qt'r gtur gevkg'hqmuy kpi 'vj g  
kpgtcevqp05"qh'vj g'9'r ctvkr cpw'vj cv'f kf "pqvtgo ctm'qp'tcpuhqto cvkqp'ctg'uwf gpw'qh  
Gpxkqpo gpv'n'Uwf kgu0

**Trend 4: Species Type**

Qh'vj g'44'f guetkr vkg'pcttcvkgu.'35'r quu'\*7; Ō; ' +hgewugf "qp'cp'kpgtcevqp'y kj 'c  
vj tgcwpgf "qt'tctg'ur gekgu'vj cv'vj g'r ctvkr cpv'f qgu pqv'eqo o qpn' 'gpeqwpvgt'kp'vj gk'g'xgt { f c {  
rkg0Vj gug'ur gekgu'kpenf gf 'c'ugc'rkqp.'j wo r dcemy j crgu.'dgctu.'cp'gm'c'f ggt.'ugc'wtvrgu.'dkuqp.  
o qwpvcp'i qcvu.'c'vgtter kp.'ugcn.'uy cpu.'cpf 'c'wtvrg { 0Qh'vj gug'35'r quu'hgcwtkpi 'kpgtcevqpu  
y kj 'tctg'cpko cnu.'8'r quu'\*68Ō7' -'cnu'g'zr rckm' f guetkdgf "c'tcpuhqto cvkxg'ghgev'qp'vj g  
r ctvkr cpv'tqo 'vj g'gpeqwpvgt0Qpg'r ctvkr cpv'uckf vj gk'kpgtcevqp'y kj 'c'ugc'rkqp'tgchko gf  
vj gk'o qvxcvqp'v'r tqgev'y kf rkg'cpf 'hcxg'cpko cnu crpg'ōv'f q'vj gk'vj kpi ō Cpqj gt  
r ctvkr cpv'y cu'tgo kpf gf "qh'vj g'ko r qv'peg'qh'eqpugt'xcvqp cpf 'vj g'eqgzkv'peg'qh'j wo cpu'cpf  
pqpj wo cp'cpko cnu'chgt'vj gk'kpgtcevqp'y kj 'uy cpu0O qtgqxt.'y q'r ctvkr cpw'vj cv'y tqg  
cdqw'vj gk'kpgtcevqpu'y kj 'j wo r dcen'y j crgu'f guetkdgf vj g'gpeqwpvgtu'cu'o cnpki 'vj go 'tghgev  
qp'vj g'j wo cp'ko r cev'qp'vj g'gpxkqpo gpv'cpf 'vj g'etvgn'v'gco gpv'qh'y j crgu'kp'ecr vkv'.'cpf

f guetkdgf 'hggrkpi 'kpur ktgf 'v'eqpvkpwg'yj gk'eqpugtxcvkqp'ghqtu0Qh'yj g'; 'r quu'hgcwtkpi  
kpvgtcevkqpu'y kj 'o qtg'eqo o qp'cpko cnu.'4'r quu'\*4404' +cnuq'f guetkdgf 'c'tcpuhqto cvkxg'ghgev  
qp'yj g'r ctvlek cpv'htqo 'yj g'gpeqwpvgt0Vj wu.'pcttcvkxgu cdqw'gpeqwpvgtu'y kj 'tctg'cpko cnu'y gtg  
409'ko gu'o qtg'rkgnf 'v'f kuewu'c'tcpuhqto cvkxg ko r cev'yj cp'gpeqwpvgtu'y kj 'eqo o qp'cpko cnu0  
c0 35'qh'yj g'44'r quu'\*7; 0; ' +cnuq'kpenf gf 'c'tghgevkkp qp'eqgzkvgep.'yj g'j wo cp'ko r cev  
qp'yj g'uwtxkcn'qh'yj g'ur gekgu.'cpf lqt'yj g'ghgevqh'j wo cp'qt'pqpj wo cp'cpko cnu'r tgugpeg  
cu'c'r quukdr'f kuwtdcepeg'v'yj g'qyj gt0Qh'yj g'6'r quu yj cv'hqewugf 'qp'eqgzkvgep.'cml'qwt  
\*322' +y gtg'eqppgevgf 'v'kpvgtcevkqpu'y kj 'tctg'cpko cnu0k'qp'g'r quv'cdqw'o qwpvckp  
i qcu.'yj g'r ctvlek cpv'uj ctgf 'yj cv'yj g'gizr g'kgep o cf g'yj go 'otgcrk' g'yj cv'j wo cp'dgkpi u  
eqgzkv'y kj 'cpko cnu'cu'y g'uj ctg'yj g'uco g'gctvj 'y kj yj go 0'k'cpqyj gt'r quv.'c'r ctvlek cpv  
yj cv'kpvgtcevgf 'y kj 'dkuqp'gizr m'kpgf 'yj cv'yj g'gpeqwpvgt o cf g'yj go '0vj kpm'yj cv'eqgzkvgep  
y kj 'cpko cnu'ku'r quukdr'0'Qh'yj g'8'r quu'yj cv'f gcnv y kj 'yj g'j wo cp'ko r cev'qp'pqpj wo cp  
cpko cnu.'5'qh'yj g'8'\*72' +r quu'y gtg'eqppgevgf 'v' tctg'ur gekgu0Qpg'r quv'cdqw'ugc'wt vgu  
tgo kpf gf 'c'r ctvlek cpv'cdqw'0vj g'ko r cev'yj cv'j wo cp



- k0 ðVj g'o quv'tgo ctædrg'gZR gtlgpeg'y cu'y kj 'c'i tqwr "qh'y j crgu'y j lej 'eqo g  
 vj tqwi j "qwt'y cvgtu'kp'O ctej "cpf 'Cr tkn'gcej "{ gct0Uggkpi vj gug'j vi g'cpko cnu  
 tgcml 'r wu'j qy 'uo cm'y g'ctg'kpva'r gtur gevkgö
- k0 ðVj gtg'y g'ftkngf'y j kg'dgkpi 'uwtqwpf gf "d{ 'J wo r dcemu hqt'y tgg'j qwtuö
- g0 UgcndöCv'j ku'eqxg'qp'yj g'y cvgt."o cp{ 'ugcni'i cvj gtgf ctqwpf "v'uwpdcvj g0Kuy co 'kp'yj g  
 y cvgt'cpf 'y cu'j qpguwl 'uwr tkugf "d{ 'vj g'ugcnu'æremqh'j qukrkv' 'cpf 'uggo kpi n' 'f kutgi ctf  
 hqt'j wo cpu'uy ko o kpi 'kp'uwej 'emug'r tqzko kv'0Vj g'ugcnu y gtg'uwpdcvj kpi . 'uy ko o kpi .  
 erko dlpi "qp'yj g'tqemu."gplq{ kpi 'vj g'uwp."gei "Ky cu ucpf kpi 'uwr gt'emug'v'y q'ugcnu  
 y j q'uggo gf "v'i gv'kp'cp'cti wo gpv'y kj "gcej "qvj gt "{ gvf kf 'pqv'gxgp'dcv'cp'g{ g'cv'o g0  
 Rtgw{ 'pgcv'j qy "ceewuqo gf "cpko cni'ecp'i gv'v'dgkpi pgct'j wo cpuö
- h0 Dwpp{ <ðK'y cupø'o qxkpi 'cv'cm'gxgp'y j gp'Keco g'emug vq'kv'cpf 'kv'y cupø'drkpnkpi lkv  
 g{ g'y cupø'o qxkpi 0Kdgi cp'v'i gv'y qttkgf "cpf 'eqpukf gt vj g'r quukdkkv' 'vj cv'vj g'dwpp{ 'y cu  
 htq| gp'v'f gcvj . 'y j lej 'uectgf 'o g'cpf 'o cf g'o g'hggnuq'uqtt{ 'hqt'k0Ky qwr 'pqv'eqpukf gt  
 o { ugrh'cp'cpko cni'qxtg'd{ 'cp{ 'o gcpu."cpf 'pqto cm{ co 'o qtg'chtckf "v'i gv'emug'v'cp{  
 y kf "cpko cni'0Rgtj cr u'vj g'hcev'vj cv'vj ku'dwpp{ 'y cu uq'f ghpugruu'ku'y j cv'o cf g'o g'pqv  
 hgn'vj tgcvgpgf "d{ 'k'dw'tcvj gt'vj kpnkpi "qh'y c{ u vq't{ 'v'j'j gr 'kö
- i 0 F ggt<ðKmqmgf "qwukf g'yj g'y kpf qy "qh'o { 'j qwug'cpf ucy "c'f ggt'uuctkpi 'cv'o g'cpf  
 uqo r kpi 0K'y cu'c'tgcm{ "co c| kpi "gZR gtlgpeg'v'u'gg vj g'f ggt'tgeqi pk g'cpf 'kpvgtcev'y kj  
 o gö
- j 0 Dkuqp<ðQp'o { 'y c{ 'vj gtg."Kuvqr r gf "o { 'ect'v'vcng c'mqm'cv'vj ku'i tqwr "qh'dkuqp0K  
 y cvej gf 'vj go 'hqt'c'y j kg."cpf "gplq{ gf "dgkpi 'kp'yj gk r t gugpeg0Vj g{ 'f kf pø'uggo "v  
 pqv'eg'o g'cpf 'y gpv'cdqvw'vj gk'f c{ 'i tcl kpi "cpf 'y cmkpi ctqwpf ö



10 I qcvu<ōKi qv'c'dk'pgtxqwu'cu'vj g{ 'eco g'emug'v'wu'v'etquu'vj g'r cvj 0Vj g{ 'f kf 'pqv'uggo  
vq'o kpf 'vj g'fcev'vj cv'vj gtg'y gtg'r gqr ng'cni'cni'pi 'vj g'r cvj . 'cu'ni'pi 'cu'y g'f kf 'pqv'i gv'vqg  
enugō

10 Ugc'Nkqp<ōQp'qpg'gzr gf kkp'y g'gpeqwpvgtgf 'c'ugc nkqp'ur tcy ngf "qp'c'dgpej 'tgukpi 0K  
ucv'qp'vj g'dgpej "qr r qukg."cdqw'8'hggv'cy c{0K'iqngf wr . 'kf gp'kkgf "o g'cu'c'pqp/vj tgcv  
cpf 'y gpv'dcem'v'unggr 0K'eqwf pō'j grr "dw'pqv'eg c'r gtuqpcrv{ 'v'j ko . 'hng'j qy "{ qw'hgn  
y j gp "{ qw'g'pcr r kpi "qp'vj g'eqwej "cpf "uqo gqpg'y cmu k'p'uq "{ qw'iqm'vr "dghgtg'i two r kq  
i q'dcem'v'upqql kpi ō

67067' "qh'r quu'tghgtgpegf 'j wo cp'r tqzko kv{ 'v'y kf nkg ur geku0Ugxgtcn'qh'vj gug'r quu

6.0801.1 6.13##cu 80 2,λ tp

hpf lpi u'd { 'kmwo kpcvpi 'vj g'xgt dci g'wugf 'vq'f guetkdg'pqp/j wo cp'cpko cni'go qvqpu'cpf 'ugpvkpeg  
 cpf 'tghphqteki 'vj gk'tguwuu'tgi ctf lpi 'c'eqttgrvqp dgy ggp'hgo cngu'cpf 'go qvqpcr'eqppgevkp  
 y kj 'pqp/j wo cp'cpko cni'Eqtpkuj 'gv'cni'423: -0Hqwtvgg qh'vj g'y gpv{/wy q'r ctvkr cpw'y tqvg  
 cdqw'vj g'r gtegxgf 'go qvqpu'qh'vj g'cpko cni'kp'uqo g ecr cekv{ 'kpf lecvpi 'cp'cempqy rgi go gpv'qh  
 pqp/j wo cp'cpko cni'ugpvkpeg0k'qvj gt'y qtf u.'o qtg'vj cp j cni'qh'vj g'r ctvkr cpw'kpenmf gf  
 eqo o gpw'tgrvpi 'vq'cpko cni'ugpvkpeg'y j gp'cungf 'vq uj ctg'c'pcttcvkg'cdqw'c'y kf rkhg  
 kvgtcevqp0vj gug'r gtegxgf 'go qvqpu'tcpi gf 'öecro ö vq'öci i tguukxgö'cpf 'vj g'r quw'kpenmf gf  
 y qtf u'wej 'cu'gzekgf . 'tgrczgf . 'htwutcvgf . 'wpr j cugf . eqpvgr0Qh'vj g'r quw'vj cv'kpenmf gf 'vj gug  
 ng{y qtf u'cpf 'ugpvko gpw.'vj g'ur geku'qh'vj g'cpko cntcpi gf 'htqo 'mqecn'dcem{ ctf 'dglpi u'vq  
 kvgtpcvqpcn'tctg'ur geku'kpf lecvpi 'vj cv'ur geku rkngr{ 'j cf 'pq'ko r cev'qp'y j gjv gt'qt'pqv'vj g  
 r ctvkr cpv'kpenmf gf 'eqo o gpw'qp'ugpvkpeg0O cp{ 'qh'vj g'ur geku'ctg'hqwpf 'kp'vj g'Wpkgf 'Ucvgu  
 dw'mqecvqpu'cniq'kpenmf gf 'Uy kj gtrpf . 'Dgto wf c. Dtc| kn'cpf 'vj g'I cnr ci qu0P qpg'qh'vj g  
 r ctvkr cpw.'j qy gxgt.'wugf 'vj g'y qtf 'ugpvkpeg'kpf lecvpi 'vj cv'r gtj cr u'vj g{ 'gZR gtlkpeg'cpko cn  
 ugvkpeg'y kj qw'j cxkpi 'rgctpgf 'cdqw'vj g'hqto cneqpegr 0F qnd{ 'cti wgu'hqt'vj g'gZR cpukp'qh  
 gpvktqpo gpvni'gf wecvqp'ur gekk'ecm{ 'tgrcvgf 'vq'go r cvj { cpf 'cpko cni'ugpvkpeg'y j kej 'y g'cniq  
 tgeqo o gpf 'cu'o cp{ 'r ctvkr cpw'y gtg'pqv'cu'y gmlphqto gf qp'eqpugtxcvqp'cpf 'vj g'go gti lpi  
 rkgtcwtg'qp'ugpvkpeg'0F qnd{ 'gv'cni'4242-0Gf wecvqp ur gekk'le'vq'vj ku'vqr le'dglpi 'i kxgp'r tkqt'vq  
 eqpf wevpi 'c'uwf { 'uwej 'cu'vj ku'o c { 'j cxg'ko r rkecvqpu qp'tguwuu'cpf 'vgtö kqmqi { 'wugf 0

***Trends in human emotion***

Vj g'f cv'eqngevgf 'uj qy u'vj cv'j wo cpu'gZR gtlkpeg'c dtqcf 'tcpi g'qh'go qvqpu'y j gp  
 kvgtcevpi 'y kj 'vj g'rkv'gu'cpf 'ugpvkpv'ur kksu'qhy kf rkhg'cpko cni'0Y j gp'r ctvkr cpw'tgr qtvgf  
 hgnkpi u'qh'go r cvj { 'hqt'pqp/j wo cp'cpko cni'vj g{ 'hgnv'ytg'utwi i rki 'kp'uqo g'y c{.'vj g{  
 o gpv'kpgf 'j qy 'vj g'cpko cni'utwi i ng'o cf g'vj go 'vj kmetk'ecm{ 'cdqw'j wo cp'cpf 'pqp/j wo cp

cpko cnlkpvgtcevkqpu'cpf lqt'eqpugtxcvkqp0Vj ku'kpf kpi 'tghgevu'y g'y qtm'qh'\*Y cmcej 'g'v'c'0'423: +  
k'p'y j lej 'y g'cwj qtu'ucv'g'y cv'uwo o qplki "eqo r cuukqp ku'ko r qtcv'p'y j gp'y kpnkpi "etkkekcm' "cpf  
g'y kecm' "cdqw'eqpugtxcvkqp0Kpvgtguvki n'.'y g'eqo r cuukqp ugxtgn'qh'y g'r ctv'ekr cpvu'hgn  
kpxqmgf 'c'ugpug'qh'f w'f 'v'q'eqpugt'xg'y g'rkxgu'cpf y gm'dgkpi "qh'y k'f r'k'g'cpko cnu0Vj g'o clqtk'f' "qh  
r ctv'ekr cpvu'g'zr tguugf 'r qukkx'g'hgnkpi u'k'p'y g'k p'cttcv'xgu'tgeqwpv'kpi 'y g'k'g'zr g'k'g'pegu'y k'j  
y k'f r'k'g'cpko cnu0Vj ku't'g'p'f 'ku'g'zekkpi "dw'p'qv'p'geguuctk'f' u'w'r tkukpi 0O qt'g'q'x'g't.'uwej 'k'p'f k'pi u  
c'k'k'o 'y cv'ek'k' gp'uek'g'peg'i tqw u'r tq'x'k'f g'go q'v'x'g' g'zr g'k'g'pegu'y tqwi j 'g'f wecv'kpi 'r ctv'ekr cpvu'qp  
ko r qtcv'p'g'p'x'k'q'po gp'v'c'n'v'q'r leu'\*R'c'g'eq'g'v'c'f'0'4243+0

***Trends in Transformative Narratives***

Vj g't'guvnu'hqwpf 'k'p'y ku'uwf { 'ctg'eqpukv'g'p'v'y k'j r t'g'x'k'q'w'u'uwf { a'k'p'f k'pi u'y cv  
g'zr g'k'g'pegu'y k'j 'y k'f r'k'g'j' c'x'g'y g'c'd'k'k'f' "v'q'o q'v'x'c'v'g' j wo cp'cev'q'tu'v'q'y c't'f' "go r cv'j g'v'e'cev'k'q'pu  
v'q'y c't'f' 'y k'f r'k'g'c'p'f "c'h'g'ev'x'g'c'p'f "go q'v'k'p'c'n't'g'ur q'p'ugu v'q'y k'f r'k'g'u'v'ko w'k'\*N'c'tu'q'p'g'v'c'f'0'4238=  
F'q'nd'f'."42420N'c'tu'q'p'c'p'f "eq'ng'ci v'gu'h'q'wp'f 'y cv'g'zr g'k'g'pegu y k'j 'j' q'w'ug'ur c't't'q'y u'r qukkx'g'n'f'  
c'h'g'ev'g'f' 'r ctv'ekr cpvu't'g'c'w' gp'v'q'h'y g'ur g'el'gu.'y j lej ku'uw' r q't'v'g'f' 'd' { 'y g'q'x'g't'y j g'n' k'pi 'r q't'v'k'p'  
q'h'g'zr g'k'g'pegu'y cv'q'w't'uwf { 'h'q'wp'f 'v'q'd'g'r ctv'ek'w'c't'n'f' v'c'p'uh'q'to c'v'x'g'0'F'q'nd'f' { 'h'q'wp'f 'y cv'y t'k'k'pi  
cp'g'u'uc' { 'h't'q'o 'y g'r g'tur g'ev'x'g'q'h'c'p'c'p'ko c'n'y g' { 'j' c'f' r t'g'x'k'q'w'u' { 'q'd'ug't'x'g'f' "eq'p't'k'd'w'g'f'  
u'k'i p'k'h'ec'p'v'f' "v'q'y g'k'g'p'x'k'q'po gp'v'c'n'g'f' wecv'k'q'p'c'p'f go r cv'j g'v'e'eq'p'p'g'ev'k'q'p'v'q'c'p'ko c'nu'\*F'q'nd'f' .  
4242+0Q'w't'uwf { "eq'p't'k'd'w'gu'v'q'F'q'nd'f' { a'y q't'm'f' { 'u'j' q'y ecukpi 'y g'r q'y g't'q'h'g'zr g'k'g'p'v'c'n't'g'h'g'ev'k'q'p'  
q'p'j' wo cp'a'eq'p'eg'r v'k'q'pu'q'h'c'p'f "eq'p'p'g'ev'k'q'pu'y k'j "q'v'j g't ur g'el'gu'0H'k'g'g'p'q'h'y g'44'\*8: Ø: ' +  
r ctv'ekr cpvu'g'k'j g't'ko r r'ek'n'f' "q't'g'zr r'ek'n'f' "t'g'h't't'g'f' v'q'y g'v'c'p'uh'q'to c'v'x'g'p'c'w'w'g'q'h'y g'k't' 'y k'f r'k'g'  
k'p'v'g't'cevk'q'p.'u'wi i guvki 'y cv'k'p'et'g'c'ug'f' 'h't'g's'w'g'p'e' { 'q'h'j wo cp/y k'f r'k'g'k'p'v'g't'cevk'q'pu'j' cu'y g'r q'v'g'p'v'c'n'  
v'q'ko r t'q'x'g't'g'c'w' gp'v'q'h'q'v'j g't'ur g'el'gu'0"R'ct'v'ekr cp'v'38a'uc'v'g'o gp'v'ec'r w't'g'f' 'y g'ug'p'v'ko gp'v'q'h'  
o cp' { 'q'h'y g'i tqw a'o go d'g'tu'c'v'j g' { 'y g't'g'x'g't' { 'ec'm' c'p'f "ug'go g'f' "s'w'k'g'eq'p'v'g'p'v'lw'v'j' c'pi k'pi "q'w'

qp'vj g'o qwpvcp0Vj ku'gZR gtlgpeg'o cf g'o g'tgcrk g'vj cv'j wo cp'dgkpi u'eqgzku'v'y kj 'cpko cnu'cu'y g  
uj ctg'vj g'uco g'gctvj 'y kj 'vj go 0K'r ctvewrct.'tghgtgpegu vq'eqgzku'v'y gtg'j ki j n' r'tgxcrgp0  
Vj ku'o c{ 'dg'f wg'vq'j wo cpaf'qo kpcpeg'lp'vj g'pcwctny qtrf.'qhv'p'ngcf kpi 'vq'ugr ctevkp'qh  
ur gelgu0'Y j gp'j qo q'ucr kpu'ctg'gpeqwtci gf 'vq'lpvgtcevy kj 'qvj gt'ur gelgu'lp'vj gkt'v' r'lecn  
gpv'vj g' ctg'cdng'vq'f geqpuv'wv'vj g'f qo kpcpvpwctg/uqekv' 'kf gqni'lecn'f kxkf g0  
Cempqy rgi i kpi 'vj g'xcnwg'qh'o wnkur gelgu.'cu'lpvtqf wv'gf d{ 'cwj qtu'Mktmug{ 'cpf  
J gm tglej \*4232+.'lp'qwt'uj ctgf 'gpv'ku'c'etwecnuvgr 'vqy ctf u'lwuv'r tguv'xv'kq'p'0'Mktmug{  
cpf 'J gm tglej .4232+0' Cp'qxgty j gm kpi 'o clqtkv' 'qh'vj g'gZR r'lekn' 't'cpuhqto cv'xg'gZR gtlgpegu  
qeewt'gf 'dgy ggp'j qo q'ucr kpg'cpf 'c'ur gelgu'vj g' lpvgtcevy kj 'tctgn'0'Vj ku'o c{ 'uwi i guv'vj cv  
ur gelgu'lpvgtcevkpu'ctg'o qtg'r qy gthw'vj j gp'vj g' 'eqv'cuv'v' r'lecn'lpvgtcevkpu'0'Hqt'gzco r'ng.  
Rctv'lekr cpv'4'y tqv'cdqww'vj gkt'gZR gtlgpeg'y kj 'j wo r'dcemy j crgu'0'Vj g'f c{ 'y cu'qpg'Ky km  
hqtgxgt'tgo go dgt'y kj 'vj g'tcpuegpf gpv'uqwpf u'qh'y j crgu dtgcej kpi 'pgctd{ 'cpf 'vj g'tgcrk' 'qh  
y j cv'y g'xg'f qpg'vq'vj gug'y cvgtu'ukp'kpi 'lp.0'Vj g r'ctv'lekr cpv'tgr qt'v'gf 'vj cv'vj g'gZR gtlgpeg'j cf 'c  
f'kt'gev'lo r'cev'qp'vj gkt'y qtm'cpf 'eqv'kdw'kq'vq'eqpugt'xv'kq'p' kpk'cv'xgu'0' Cf'f'k'k'q'p'cm' .'ej ctkuo cv'le  
gZR gtlgpegu'y kj 'cpko cnu'o c{ 'j cxg'vj g'r'qv'p'v'cn'vq' dg'o qtg't'cpuhqto cv'xg'0'Rctv'lekr cpv'33  
eqppgevgf 'y kj 'c'f'gg'0'K'dtqwi j v'o g'emugt'vq'y kf r'ng' cpf 'K'hn'o qtg'eqppgevgf 0'K'p'ungcf 'qh'lwuv  
qdugt'x'kpi 'vj ku'cpko cnu'qo 'vj g'lp'v'kf g.'Ky cu'cewcm' o c'kpi 'g'g'eqp'cev'cpf 'dgkpi  
cempqy rgi i gf 'd{ 'vj ku'f'gg'0'J wo cpu'o c{ 'dg'o qtg'eqppgevgf cpf 'o q'v'x'cv'gf 'vq'r tq'gev'ur gelgu  
vj cv'gzj kdk'j wo cp'rng'hgcw'wt'gu'0'Vj g't'guv'nu'uj qy 'vj cv'vj gug'lpvgtcevkpu'ctg'lo r'qt'v'p'v'hqt  
k'pvt'qf wv'kpi 'o wnkur gelgu'eqppgevkp'cpf 'ug'p'v'kpeg'0 Vj ku'uwf { 'y cu'ur gel'lecm' 'lpvgt'gug'f 'lp'vj g  
gh'gev'qh'vj gug'lpvgtcevkpu'qp'r'gtur ge'v'x'gu'qh'eqpugt'xv'kq'p=j qy gxgt.'qpn' 'h'x'g'gZR gtlgpegu'j cf 'c  
f'kt'gev' 'r'qu'k'x'g'lo r'cev'qp'vj g'r'ctv'lekr cpv'ae'eqpugt'xv'kq'p' kpk'cv'xgu'0'Vj gug't'guv'nu'uw' i guv'vj cv  
vj gtg'ku'c'ecw'ucn'gh'gev'qh'y kf r'ng'lpvgtcevkpu'qp'j wo cp'af'r'gtur ge'v'x'gu'qp.'go q'v'k'p'u'uj ctgf 'y kj .



tgugtej 'hqt cv'etgcv'cp'k'pvtcevxg'cpf 'o gcpkpi hwi'gZR gtlgpeg'hqt'yj g'r ctvkr cpw. 'k'ecp'dg  
kpetgf kdn' 'tcpuhto cvxg'hqt'yj g'tgugtej gtu'cu'Tlej ctf uqp \*4223+'j ki j rki j w'cpf 'f'kuewugu'cv  
ngpi yj 'kp'j gt'y qtn0Cffkkqpcmf. 'wukpi 'c'pqp/tcpf qo eqpxgpkpeg'uco r ng'etgcvf 'c'f'kxgtug  
r ctvkr cpv'dcug0Vj g'r ctvkr cpv'r qqr'ku'eqo r qugf qh'cm'ci gu'qxgt'yj g'ci g'qh'3: . 'dqy 'eqmgi g  
cpf 'pqp/eqmgi g'uwf gpw. 'cpf 'c'o kz'qh'Dquvq'Eqmgi g cpf 'pqp/Dquvq'Eqmgi g'eqo o wpkf  
o go dgtu0J cxkpi 'c'f'kxgtug'i tqwr 'qh'r ctvkr cpw'r tqxkf gf c'y kf g'tcpi g'qh'k'pvtg'w'lp'y kf rkg.  
r gtur gevkgu. 'cpf 'gZR gtlgpegu'y kj 'y kf rkg0Wukpi Hcegdqnm'cu'yj g'ej qugp'r r'v'hto 'hqt  
eqpf wvki 'y ku'tgugtej 'cmqy gf 'yj g'r ctvkr cpw vq'hqugt'eqppgevku'y kj 'gcej 'qy gt'cpf 'yj g  
tgugtej gtu'k'pugcf 'qh'dgkpi 'dnkf 'q'y j q'yj g'qy gt r ctvkr cpw'y g'g0Vj ku'wps wg'qprkg  
r r'v'hto 'r tqxkf gu'c'pgy 'eqv'kdwkp'v'eqo o wpkf dwkf kpi 'kp'eqpf wvki 'gy pqi tcr j le.  
pcttcvxg'tgugtej 0Vj g'tgugtej gtu'r qugf 'gf wecvkpcnxf gqu'qy ctf u'yj g'gpf 'qh'yj g'f'cv  
eqmgevku'r tqegu'v'k'p'hto 'yj g'o go dgtu'qh'yj g'i tqwr qh'yj g'tgcuqpu'hqt'yj g'tgugtej 'cpf  
gZR r'k'kpi 'hg' { 'eqpegr w'lp'yj g'pqp/j wo cp'cpko cntgugtej ur ceg0Vj ku'cmqi 'y kj 'yj g'k'p'wukp  
qh'r gtuqpcn'pcttcvxg'ku'lp'yj g'o cpwetr v'cmqy gf 'yj g' tgugtej gtu'v'eq/etgcv'yj kj 'yj g'r ctvkr cpw  
cpf 'gcej 'qy gt 'yj tqw j 'yj g'eqv'kdwkp'qh'r gtuqpcncpgef qv'g0Ukwc'kpi 'yj g'tgugtej gtu'yj kj k  
yj g'pcttcvxg'ur ceg'cu'qr r qugf 'v'c'r w'g'qdugtxcv'kpcncpf 't'g'k'g'cv'xg'tqrg'ku'y j cv'o cngu  
pcttcvxg'tgugtej 'cpf 'gy pqi tcr j { 'wps wg'cu'p'qygf d { 'D%pkuj /Dt'gf'plej '\*423: +0Y j cv'ugw'qwt  
uwf { 'cr ctv'ku'yj g'eqv'kdwkp'qh'qwt'xqlegu'lp'yj g' tgugtej 'ur ceg'v'gf wecv. 'k'p'hwpeg. 'cpf  
go qv'cmqi ukf g'r ctvkr cpw'lp'v'wg'ugpv'k'p'v'hto 0Vj ku'uwf { 'y cu'rti gn' 'cp'qtki k'p'cntgugtej  
o gy qf 'f'guki p'yj lej 'cmqy gf 'yj g'tgugtej gtu'v'ckqt yj g'r tqegu'v'ur gekk'f'gukt gf 'qweqo gu  
cpf 'ko r'ncv'k'p'v'ht'yj g'tgugtej gtu. 'r ctvkr cpw. cpf 'rti gt'h'gn' 'qh'y kf rkg'tgugtej 0

**Limitations**









eqo o wplv{ 'eqwf 'uwf { 'y j cv'y g'o quv'ghgevxg'y c{ u'ctg'vq'lpetgcug'cpf 'o clpvcpl'gpi ci go gpv  
 co qpi 'r ctvkr cpw'y kj 'vj gug'vqr leu0Hwwt g'tgugctej gtu eqwf "gxr mtg'kh'uj ct'kpi 'ctvkr gu.  
 Htgs wgpw{ 'eqo o gpvki 'cpf 'h'kpi 'r quw.'r tqxkf kpi pgy 'r tqo r w'qt "qyj gt"eqpvgpv'tgi wctn{.'wukpi  
 ðNkxgö'hgcwt gu'qt "qyj gt 'hcegu'qh'yj gug'uqekn'pgy qtnkpi r rlvqto u'y qwf "dg'yj g'o quv'uweeguuhwn  
 utcvgi kgu'vq'uwuxkp'c'nqpi /vgo "cpf 'vki j vmpk'eqo o wplv{ ctqwpf 'vj gug'kf gcu0

### References

D³pkæj /Dtgf plej . 'Dtki kwg0\$Y tkkpi 'yj g'Gyj pqi tcr j le Uqt { <Eqputwvki 'P cttcvxg'qw'qh  
 P cttcvxgu\$Hcdwrc."xqr07; . 'pq03/4."423: . 'r r 0: /480  
 j wr u<lf qkQti B20737 hcdwrc/423: /2224

Dqtf c. "QH0\*4228+0Rctvkr cvqt { 'Cvkap'Tgugctej kp'Uqekn'Vj gqt { <Qtki kpu'cpf 'Ej cmgpi gu0Kp  
 vj g *Handbook of Action Research*0J 0Dtcf dw { \*Gf 00R049/590

Eqpvtgcu."Tcpf qr0\*423; +0Vj g'Dtqngp'Gyj pqi tcr j { <Nguuqpu'htqo 'cp'cm quv'J gtq0*Qualitative  
 Sociology*. 42\*4+."383/39; 0

Eqtpkij . 'C0'Y knqp. 'D0'Tcwdgpj glo gt. 'F 0'(' 'O eI tggx{. R0\*423: +0F go qi tcr j leu'Tgi ctf kpi  
 Dgrgh'lp'P qp/J wo cp'Cplo cn'Ugpkpeg'cpf 'Go qvqpcnGo r cvj { 'y kj 'Cplo cn'c'Rkqv  
 Uwf { "co qpi 'Cwgpf ggu'qh'cp'Cplo cn'Y grhctg'U{o r qukwo 0*Animals*, 8.'0f qk<  
 3205; 2 kpk 322396

F kl | . 'Ucpf tc00WP 'Tgr qt v<'P cwtg'u'F cpi gtqwu'F gerkpq )Wpr tgeg f gpvgf )=Ur gelgu'Gz vkevqp  
 Tcvgu')Ceegrtcvkpi )'ó'Wpkgf 'P cvkpu'Uwuxkpcdng F gxgr o gpv0'Wpkgf 'P cvkpu.'Wpkgf  
 P cvkpu.'8'O c { '423; .  
 y y y 0wpQti luwuxkpcdngf gxgr o gpvldrqi 423; 127 lpcwtg/f gerkpq/wpr tgeg f gpvgf /tgr qt v10

F ko gt.'O C.'Kppctknk'H'Vtk'CP.'I ctuj grk.'FN. Ectvt.'P J 0Ct v'hekn'pki j v'ki j v'j gr u'ceeqwpv  
 hqt'qdugt xgt'dlcu'lp'ekk gp'uekpeg'o qpkqt kpi 'qh'cp'gxr cpf kpi 'hcti g'o co o cnl'qr wrcvqp0  
 I0Cplo 0Geqr04242=22<3ó'350j wr u<lf qkQti B20333 B587/48780555:

F qnd { 'P 0\*4242+0P qpj wo cp'cpko cni'cpf 'y g'hwwtg'qh'gpxktqpo gpvni'gf wecvkp<'Go r cvj { 'cpf  
pgy 'r quidkrlkgu0Journal of Environmental Education. 50\*668+:'62566370  
[j wr u<l f qkQti B2B2: 2122; 7: ; 860423; B8: 9633](#)

Lcpg'I qqf cni'kpuvkwg'P gy '\ gcrpf 0\$Cplo cni'Ugpkpeg\$. F ge'3; . '423; .  
[j wr u<l y y 0 qwwdg0eqo ly cvej Ax? qOm I uP 9LZK hgcwtg? go da vkr0](#)

Mktmg { 'U0( 'J gm tglej . 'U0\*4232+0Vj g'Go gti gpeg qh'O wnkur geku'Gvj pqi tcr j {0E wmwtn  
Cpj tqr qmji { . '47\*6+:'767/7980

Nctuqp. 'Nkpeqp' T0Ectgp' D0Eqqr gt( 'O ctni'G0J cwdgt \*4238+'Go qvqpu'cu'F tkxgtu'qh'Y krf rkhg  
Ugy ctf uj kr 'Dgj cxlqt<'Gzco klpki 'Ekkk gp' Uelgpeg'P guv O qpkqtu0T gur qpugu'vq' kpxcukxg  
J qwug'Ur cttqy u. 'J wo cp'F ko gpukqpu'qh'Y krf rkhg. '43-3. 3: /55. 'F QK

O cplhtgf q. 'O 00'Vgnn' VN0'F qp'Ectnqu. 'C0Y 0'Uwnkxcp. N0'Dtki j v' C0F 0'F kgvej . 'C00 0  
Dt wunqwt. 'L0'cpf 'Hwnqp. 'F 0\*4242+'Vj g'ej cpi kpi uqekqewmwtn'eqpvzv'qh'y krf rkhg  
eqpugtxcvqp0Eqpugtxcvqp'Dkqmi {0f qk32B333 lqdkB56; 5

Rcrgeq. 'E0'Rgvt. 'U0I 0'Ugqcp. 'P 0'U' Mvho cpp. L0( 'Cti {tk' R0\*4243+0'kpenwukxgpguu'cpf  
F kxgtukx' k' Ekkk gp' Uelgpeg'0Vj g' Uelgpeg'qh'Ekkk gp Uelgpeg. '483/4: 40

Tlej ctf uqp. 'N0\*4223+0I gwki 'r gtuqpcn<'Y tkkpi /uqtkgu0kpvtpcvkpcn'Lqwtpcn'qh'S wcrkcvkxg  
Uwf lgu'lp'Gf wecvkp. '36\*3+:'55/5: 0

Ueqw. 'F cy p' O 0'gv'cni0\$Ur cvkn'F kntkdwkqp'qh'Ucteqr vke O cpi g'Ucteqr vgu'uecdkxk'lp'Wtdcp  
Hqz gu'Xwr gu'xwr gu+'lp'I tgcv'Dtkckp'cu'F gvto kpgf d { 'Ekkk gp' Uelgpeg\$'Wtdcp  
Gequ { ugo u'4507 '\*4242+<'3349/620RtqS wgu0Y gd09 Qev042420

Vtngxu. 'C0'gv'cni0\$Uwv'Rt gugtxcvqp0'Dkqmi kecnEqpugtxcvqp. 'xqr044; . '423; . 'r r 0356663.  
f qkj wr u<l f qkQti B2B238 l0kqeqp0423: B3B3: 0

Y crnej . 'Ctkcp'F 0'gv'cni0\$Uwo o qkpi 'eqo r cuukqp'vq cff tguu'y g'ej cmgpi gu'qh'eqpugtxcvqp0\$  
Eqpugtxcvqp'Dkqmi { '54B '\*423: +<'3477/34870

.. | f go kt. 'Xwtcni0\*4242+0\$Qpg'P cwtgö<'C'P gy 'Xqecdwrnt { cpf 'Hico g'ht'I qxgtcpeg  
kppqxcvqp'lp'RquvEqxkf/3; 'Rrpgvct { 'J gcrnj 0C'Lqwtpcn qh'kvgi tvkxg'Dkqmi { . 'xqr046B3

**Appendix A.**

**Recruitment and Informed Consent Message (Sent to participant after joining the Facebook group)**

Vj cpm{ qwhqt "{ qwt 'kpvgt gu'kp'r ctvek r c'kpi 'kp'qwt uwf {0Vj tqwi j 'y ku'tgugctej 'y g'j qr g'v'gdwgt wpf gtucpf 'y g'y c{u'j wo cp'hggkpi u'cdqw'cpko cni'ugpvkpeg cpf 'go qv'kqp'ecp'ko r cev'y g vgcwo gpv'qh'cpko cni'cpf 'cwkwf gu'cdqw'eqpugtxcv'kqp0

Ki{ qw'ci tgg'v'cng'r ctv'kp'y ku'uwf {."{ qw'y kmdg'cungf 'v'uwo k'r gtuqpcn'cpgef qv'gu'cdqw"{ qwt kpvgtcev'kpu'y kj 'y kf rkhg0K "{ qwt 'tgr qpugu'y g'gpeqwtci g { qw'v'gh'gev'qp "{ qwt go qv'kpcn'eqppge'v'kqp 'v'y kf "cpko cni'cpf "{ qwt 'kpvgr tgv'kqp qh'cpko cni'go qv'kqp0Y g y greqo g'y g'uwo k'kqp'qh'pette'v'xgu.'r j qvi ter j u. xkf gqu'cpf lq't'cwf kq'tgeqtf kpi u'qh { qwt 'kpvgtcev'kpu'y kj 'y kf rkhg0

Y g'ctg'j qr kpi "{ qw'o c{ 'dgpgh'htqo 'dglpi 'kp'y ku'uwf { cpf 'kp'y g'eqo o wpk' 'etgcvf 'y tqwi j qwt'r r'v'htqo 'y j lej 'y kn'hqugt'o gcpkpi hwi'eqpxgtucv'kpu cdqw'r ctvek r cpwø j wo cp/cpko cni'kpvgtcev'kpu0Vj g'tgugctej gtu'j qr g'v' i gpgtcv'npqy rgi g'cdqw'y g'tqng'qh j wo cp'w'pf gtucpf kpi 'qh'ugpvkpeg'kp'eqpugtxcv'kqp'r tcev'egu y cv'o c{ 'dgpgh'v'uekv'0

Vj g'tgeqtf u'qh'y ku'uwf { 'y kn'dg'ngr v'r tkxcv'g0K cp{ 'uqtv'qh'tgr qt'v'y g'o c{ 'r wdrkuj . 'y g'y kn'pqv kpenf g'cp{ 'kphqto cv'kqp'y cv'y kn'o cng'k'r quukdrq v'k'f gpv'kh{ "{ qw'kh{ qw'y kuj 'v'tgo clp cpqp{o qwa0Ki{ qw'j cxg's wgu'kpu'cdqw'y ku'tgugctej . { qw'o c{ 'eqpvcev'lgppk'ht'Uej cwt. lgppl'ht'ngm{GB deQf w.'839/774/63520

D{ 'v'r kpi "{ qwt 'hwn'pco g'kp'y ku'vz'v'dqz."{ qw'ctg ci tggkpi 'v'dg'kp'y ku'uwf {0O cng'uwg'g'qwt