



!"#\$%&'()*+,-./0&*1+.234*1+3(+..2(+3*

5.26*7**8987*

!
!
!
!

SOLA 4951/SOLA9451

RESEARCH THESIS A

"#\$%&! ' (#\$&#!) *#\$+, -!.....Y
0 ' (#\$&#!) *#\$+, -!\$()!& ' (-1, #\$\$# ' (!# 2 * -!% ' 3!& ' 13- *!& ' (4* (' 3!.....Y
0 ' (#\$&#!) *#\$+, -!\$()!& ' (-1, #\$\$# ' (!# 2 * -!% ' 3!\$)) #+' (\$, !, * *3-5) * 2 ' (-#3\$# ' 3-5, \$6! -#\$%!!.....Y
728 ' 3#\$ (#!, + (9-!.....Y
0 ' 13- *!) *#\$+, -!.....Y
03*)#!8 ' + (#-!.....Y
0 ' (#\$&#!: ' 13-!.....;.
" 1 2 2 \$3<!\$()! =+2 -! ' %!#: *!& ' 13- *!.....;.
"#1) * (#!, * \$3(+(>! ' 1#& ' 2 * -!.....;.
?@!AB ' (-C!\$()!DE!D3' >3\$2!F*\$3(+(>!G1#& ' 2 * -!.....;.
0 ' 13- *!F*\$3(+(>!G1#& ' 2 * -!A2\$88*)#!?!?@!D3' >3\$2!\$()!DE!F*\$3(+(>!G1#& ' 2 * -!6*, ' HC!
J*\$&: +(>!-#3\$#* >+* -!.....||
0 ' 13- *!-&: *)1, *!.....K
=- * - - 2 * (#!.....L
=- * - - 2 * (#! ' 4*34+*H!
J: * -+ -! =!A " GF= I MKN5 " GF=MIKNC! = - - * - - 2 * (#!.....D
D3* - * (#\$\$# ' (!.....M
" 162+ - - + ' (!.....M
P\$39(+>!.....NQ
@R\$2+(\$# ' (-!.....NQ
" 8* &\$, !& ' (-) *3\$#+' (!\$()! -188, * 2 * (#3<!\$ - - * - - 2 * (#!.....NQ
J: * -+ -! S#:)3\$H\$, T! " 1-8* (-+ ' (T!\$()!J+2 *!@R#* (-+ ' (!U!.....NQ
@R8* &#*)!3* - ' 13& * -!% ' 3!-#1) * (#-!.....NN
0 ' 13- *!*4\$, 1\$#+' (!\$()!) *4*, ' 82 * (#!.....N/
D3+V* -!.....N/
B*\$, #: !\$()! " \$% * #<!.....N/
=&\$) * 2+&! : ' (* -#<!\$()!8, \$>+\$3+ - 2!.....N;
=) 2+(+ -#3\$#4*! 2 \$##*3-!\$()!, + (9-!.....N;
=88* ()+R! =!!!@ (>+ (* *3-! =1 -#3\$, +\$!A@ =C!O ' 28*#* (&+* -!.....NK
!



K.! Z('H,*>*'!'*(>(*3+(>!)*)->(!83\$&#&*!\$())!&'(#*R#1\$,!%\$&# '3-!+28\$&#(>!#: *!
*(>(*3+(>!)+-&+8,+(*.!
L.! b()*3-#\$(+(>!%'!#: *!-&'8*T!83+(&+8,*-T!('32 -T!\$&&'1(#\$6+,#*-\$!)!6'1()-!'%!
-1-#\$(,\$6,*!*(>(*3+(>!83\$&#&*!+(!#: *!-8*&+!&!)+-&+8,+(*.!
O.! =88,+&\$#+'(!%'!*-#&6,+:-:*)!*(>(*3+(>!2*#: ')-!# '!&'28,*R!*(>(*3+(>!83'6,*2!
-',4+(>.!
g.! ^,1*(#!\$88,+&\$#+'(!%'!*(>(*3+(>!*&:(+_1*-T!# ',-!\$())!3*- '13&*-.!
M.! =88,+&\$#+'(!%'!-<-*2\$#&!*(>(*3+(>!-<(#: *--!\$())!)*->(!83'&*--*-.!
NQ.! =88,+&\$#+'(!%'!-<-*2\$#&!\$883'\$&:*-!# '!#: *!&'()1&#!\$())!2\$(\$>*2*(#!%'!*(>(*3+(>!
83'0*&#-!.!
NN.!@#:+&\$,!&'()1&#!\$())!83'%'--+'(\$,!\$&&'1(#\$6+,#<.!
N/!@%**!'3\$,\$())!H3+##*(!&'221(+&\$#+'(!+(!83'%'--+'(\$,!\$()),\$<!)'2\$+(-!
N;.!03*\$#4*T!+(('4\$#4*!\$())!83'\$*!) *2*\$('13.!
NI.!D3'%'--+'(\$,!1-*!\$())!2\$(\$>*2*(#!%'!+('%32\$#+'(!.
NK.!G3)*3,<!2\$(\$>*2*(#!%'!-*,%T!\$())!83'%'--+'(\$,!&'()1&#.!
NL.!@%**!#*\$2!2*26*3-:+8!\$())!#*\$2!,*\$)*3-:+8.!

J:+-!&'13-*!+-!)*)->(*)!#'\$)3*--!#: *!,*\$3(+(>'1#&'2*-!6*,'H!\$())!#: *!&'33*-8'()(>!
@(>(*3-!=1-#3\$,\$! "#\$>*!N!0'28*##(&<!"#\$(\$3)-!%'3!D3'%'--+'(\$,!@(>(*3-!\$-!-:'H(!
J:*!%1,,!+,+#!'!"#\$>*!N!0'28*##(&<!"#\$(\$3)-!2\$<16*!'1()!+(!=88*())+R!.=!
!
=#*3!-1&&*--%1,,<!&'28,*#(>!#: +-&'13-*T!<'1!-:'1,)!6*!\$6,*!# 'W!

=#!#: *!&'(&,1-+'(!%'!#: +-&'13-*T!-#1)*(-!-:'1,)!6*!\$6,*!# 'W!
N.! Y*4*,'8!\$!)*)->(!'3!\$!83'&*--!'3!+(4*-#>\$*!\$!: <8'#: *--!%' ,,'H+(>!+())1-#3<!\$())!
83'%'--+'(\$,!*(>(*3+(>!--\$(\$3)-!AOT!gT!MT!NQC!
/.! 03#&\$,,<13*%,*&#!'(!\$!-8*&\$,+')<!%'19('H,*>*!3*,\$#*)!# '!#: *+3!#: *--!# '8+&.!A;C!
;.! =88,<!-&+*(#&+&!\$())!*(>(*3+(>!2*#: ')-!# '!- ',4*!\$(!*(>(*3+(>!83'6,*2.!AOC



6*!&' 28,*#*)!\$()!-162+##*)!#!P*3,+() *!Z\$<!\$()!18,'\$)*)!#!#: *!" GF=! IMKN5MIKN!



A

7#!+-!+(#* () *)!# : \$#!J : * -+ -!=!& ' 4*3!# : *! -& ' 8+(>T!8,\$ ((+(>T!\$()!& ' 2 8, *#+(>!
83*8\$3\$#+' (-!%' 3!# : *!83' d* &#.!
N.! D3' d* &#!D,\$ (! i !# : +-!H+,!& ' 2 83+- *!\$!N` /!8\$> *!) ' &1 2 * (#!*R8,\$+(+(>!# : *!d1 -#%+&\$#+' (!%' 3!
: *+3!83' d* &#T!\$!3' 1> : !,\$< ' 1#! '%!\$!8,\$ (! '%!H' 39!# : 3' 1> : ' 1#!# : *!83' d* &#T!+(&,1)+(>!\$(<!



	/.! " * 2+(\$3! D3* - *(\$#+' (! ;.! D3'>3*--!a*8'3#! !	O! ! NQ!	NQ j! ! K j!	" 18*34+- ' 35=--*-- ' 3!AKQ5KQC! ! " 18*34+- ' 3!
J: * --!0!	N! ^+(\$,!a*8'3#! /.! D\$3#&+8\$#+' (! ;.! D3* - *(\$#+' (! '%!H' 39			



!

If there is a significant difference between the male and female and age groups



?*, 'H!\$3*!# :+(>-!#'!&' (-+) *3!H: * (!81##+(>!# '> *#: *3!#: *!,#*3\$#13*!\$(!)83'>3* --!3*4*H!
)&'12*(#!

<p>F#*3\$#13*!a*4*H! !</p>	<p>(W a , a a ?) ! ?3+*%!6\$&9>3'1(!# '!83'd*&#! ! "122\$3<! '%!,#*3\$#13*!3*, *4\$(!# '!83'd*&#! ! 7)*(#%+&\$#+' (! '%!>\$8-m!+(!#: *!,#*3\$#13*! ! D3'6,*2!"#\$*2*(#!A+(%'32*)!6<!>\$8-!+(!#: *!, ,#*3\$#13*C! ! B<8'#: * -+-\$(!)\$+2-!</p>	<p>KQ j!</p>	<p>N/'NK!</p>
<p>D3'd*&#!D,\$(! D3'd*&#! Y*8*()*(#! D3*8\$3\$#+'(-!</p>	<p>AH a a a a ?) ! ! D3'8'-'*!)!"',1#'(5@R8*3+2*(#\$,!P*#:')', '><! ! J: * -+!#2*,+(*!i!%'3!(*R#!#H' !#*32-! o! n1-#%+&\$#+' (! '%!#2*!\$, '&\$#+' (!%'3!*\$&:! #\$-9! ! =4\$,\$6,*!3*- '13&* -!+) * (#%+*)! ! a*_1+3*)!#3\$+((>!)!18-9+,+(>!) * (#%+*)!</p>	<p>/Q j!</p>	<p>;`K!</p>

(Ca a a a ? W a a a a ?)

D3'd*&#!-8*&%+&T!61#!2\$<!(&,1) *!
! @4+)*(&*!'!#3\$+((>!) (!-8*&%+&!*_1+82*(#!
! @4+)*(&*!'!- '2*!18-9+,+(>!)(!(*H!
- '%H\$3*52*#: ') -!
! D3*,+2+(\$3<!3*-1,#-!
! D3*,+2+(\$3<!-9*#&: * -!
! 0'28' (* (#-58\$3#-!'3)*3*)!



J: *!,\$#*!8* (\$,#<!+\$88,+*)!8*3!&\$,* ()\$3!)\$<!A+ (&,1)+(>!H**9* ()-\$ ()!816,+&! : ',+)\$<-C!#:\$#!
#: *!\$--*--2* (#!+!'4*3)1*!J: *3*!+!('!83' `3\$#\$!'!# : *!,\$#*!8* (\$,#<!% '3!-162+--+ ' (-!2\$) *!
8\$3#!H\$<!# : 3' 1>: !\$!)\$<.!
!

Ma

P\$39+(>!>1+) * ,+ (* -!% '3!\$--> (2* (#!-162+--+ ' (-!H+,,!6*!83' 4+) *)!\$#!# : *!-\$2*!#2*!\$-!
\$--> (2* (#!) *\$+, -!# ' !\$--+-#H# : !2**# (>!\$--*--\$6,*!3*_1+3*2* (#-!" 162+--+ ' (-!H+,,!6*!
2\$39*)!\$&&'3)+(>!# ' !# : *!2\$39+(>!>1+) * ,+ (* -!83' 4+) *) .!

!

J: *3*!+-('!*R\$2!% '3!# : +-!&' 13- * .!

!

7%<' 1!:\$4*!R8*3+ (&*)!\$(!+,, (*--!'3!2+-)\$4* (#13*!6*<' ()!<' 13!&' (#3' ,!#:\$#!H+,,!+ (#3%*3*!H# : !
<' 13!\$--*--2* (#!8*3%'32\$ (&*T!<' 1!\$3*! *,+>6,*!# '! \$88,<!% '3! "8*&\$,! 0' (-) *3\$#+' (!83+'3!# ' !
-162+## (>!\$ (!\$--*--2* (#! '3!+##+ (>!\$ (!*R\$2.!!
!

!

!#:\$#!bX" S!('H!:\$-!\$!^+#!# '!" #!5!" 162+##131,*T!H : +&!2*\$ (-!#:\$#!+!<' 1!-#!\$ (!*R\$2!
'3!-162+##!\$!8*+*!'!%\$--*--2* (#T!<' 1!\$3*!) * &,\$3+(>!<' 13-* ,%1%#! * ('1>: !# '!) ' !-\$ ()!&\$ (('#!
, \$#*3!\$88,<!% '3! "8*&\$,! 0' (-) *3\$#+' (.!
!

!

^'3!) *\$+, -! '%! \$88,<+(>! %'3! "8*&\$,! 0' (-) *3\$#+' (! \$ ()! &' ()#+' (-! %'3! # : *! \$H\$3) ! '%!
-188,*2* (#\$3<!\$--*--2* (#T!8,*\$- *! - **!# : *!+ (% '32\$#+' (! ' (!bX" Sf-! "8*&\$,! 0' (-) *3\$#+' (!
8\$>*.!

E

!

a*_1* -#-!% '3!# : *--!H# :)3\$H\$,T! -1-8* (-+ ' (! '3! *R#* (-+ ' (!- : '1,) !6*!2\$) *!+ (!H3+## (>!# ' !# : *!
J: *--!0' '3)+ (\$# '3.!J: *!% ', 'H+ (>!83' &*) 13* -!\$ ()!31, * -!H+,,!6*!\$88,+*)!H: * (!\$!-#1) * (#!H+ : * -!
' !H# :)3\$H! '3' 2T! '3! -1-8* ()! "GF=IMKN5" GF=M!KN.! J: *-*!31,* -! -188,*2* (#!# : *! bX" S!
) *\$),+ (* -T!&' ()#+' (-T!\$ ()!83' &*) 13* -!% '3!H# :)3\$H+ (>!%3' 2!\$!&' 13- * .!!!
DF@=" @!XGJ@W! !

!

N.! 7(!*4*3<!&\$-*!H: *3*!\$! -#1) * (#!H+ : * -!# ' !8' -#8' (*!&' 28,*#+' (! '%!# : *!# : * -+T!+.*!# ' !
-1-8* ()! H'39! \$ ()! &' 28,*#*!# : *!# : * -+!+ (! \$!,\$#*3! - * -+ ' (T! H3+##* (! \$883' 4\$,' !%!# : *!
-18*34+- '3!21-#!%3-#16*!' 6#\$+ ()!6*%'3*!-162+## (>!\$!H3+##* (!3*_1* -#!# ' !# : *!J: *--!0' `'
'3)+ (\$# '3.!

!

J: *!-18*34+- '3!2\$<13*%1-*!\$883' 4\$,' !% '3!\$!4\$3+*#<' !%13*\$- ' (-T!*>.!#:\$#!# : *! (*&*--\$3<!



/.! =!-#1) * (#!H: '!+-!8*32+##*)!#!H#:)3\$H!H#: '1!%\$,13*!%3' 2!-16d*&#! "GF=IMKN5MIKN!
-: '1,)!3*`*(3',!+(!#: *!%' ,,'H+(>!- *--+ '(!H#: !\$! J: *--+!X' 2+(\$#+' (!^'32.!X'#!#: \$#!
1() *3! ('32\$,! &+3&12-#\$(&* -!)+-&' (#(1\$#+' (!H#: '1#!%\$,13*!'3!%+(\$&+,\$! 8* (\$,#<!+-!
8'--+6,*!' (<!18!#!#: *!0* (-1-!Y\$#*!.!

!

;.! S: *(!\$!-#1) * (#!+-!>3\$ (#*)!\$(!*R#* (-+' (!#: *3*!2\$<16*!\$!8* (\$,#<13* -1,#+(>!(!\$!3*)1&#+' (!
'#!#: *!#: *--+! 2\$39.!J: +-!H+,!6*!+28' -*)!\$&&'3)+(>!#!!31,*-!\$883'4*)!6<!#: *!J: *--+!



'#: *3H+ - *! '6#\$+ (! \$! a+-9! =-- * -- 2 * (#! % '3! \$883' 4\$,! 6<! #: *+3! -18*34+- '3! \$()! 6<! #: *! " 8\$&*!
P\$(\$>*3!+(!H: ' - *!-8\$&*!#: *!H'39!+-!# '!6*!) ' (*.!)

!

a+-9! =-- * -- 2 * (#!#* 28,\$#* -!% '3! "D=0@ "T!@ sb7DP@XJ!\$()!DaG0@Yba@ " ! \$3*!\$4\$+, \$6, *!' (!
#: *! 2 ' '), *! -+#* .! a+-9! =-- * -- 2 * (#-! \$()! *R\$28, * -! \$3*! \$,3*\$) <! \$4\$+, \$6, *T! #: 3' 1> :! < '13!
-18*34+- '3!% '3! 2\$(<!\$+#+* -.!0 ' 28, *#*)!'3!2 ')+#+*)!4*3-+' (-!- : '1,)!6*!-162+##*)!\$-!-> (*)!
:\$3)!&'8+* -!\$()!P " !S '3)!*, *' (+!4*3-+' (-!# ' !Z+\$(!^' (>!0 :+(!A9%.& :+([1(-H.*)1.\$1C.!

A

!

bX" S!:\$-!\$(!' (>' +(>!&' 2 2#2 * (#!# ' !% ' -#*3+(>!\$!&1,#13*! '%!, *\$3(+(>!+(%' 32 *)!6<!\$&\$) * 2+&!
+ (#* >3+< .! =, ,! bX" S! -#1) * (#-! :\$4*!\$!



